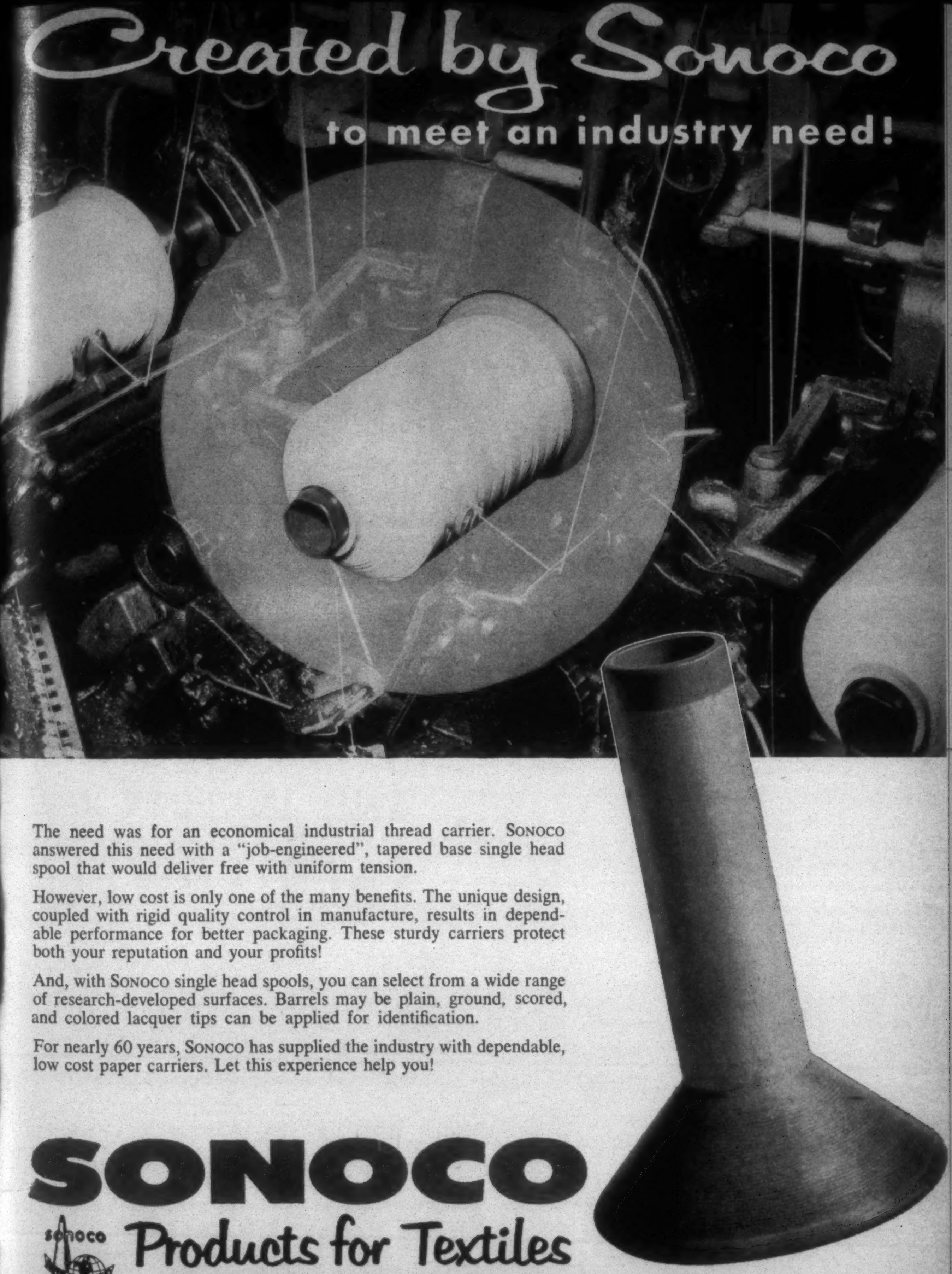
Created by Sonoco

to meet an industry need!



The need was for an economical industrial thread carrier. SONOCO answered this need with a "job-engineered", tapered base single head spool that would deliver free with uniform tension.

However, low cost is only one of the many benefits. The unique design, coupled with rigid quality control in manufacture, results in dependable performance for better packaging. These sturdy carriers protect both your reputation and your profits!

And, with SONOCO single head spools, you can select from a wide range of research-developed surfaces. Barrels may be plain, ground, scored, and colored lacquer tips can be applied for identification.

For nearly 60 years, SONOCO has supplied the industry with dependable, low cost paper carriers. Let this experience help you!

SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

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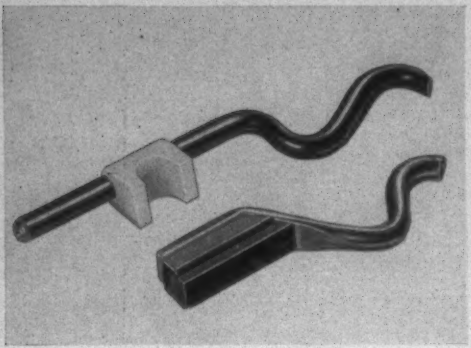
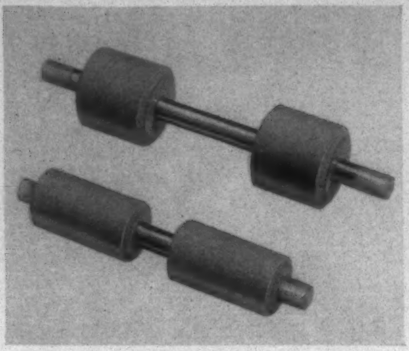
1650

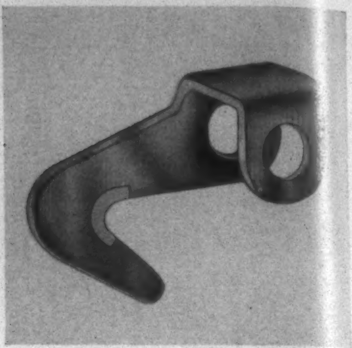
Cut Costs 3 Ways!



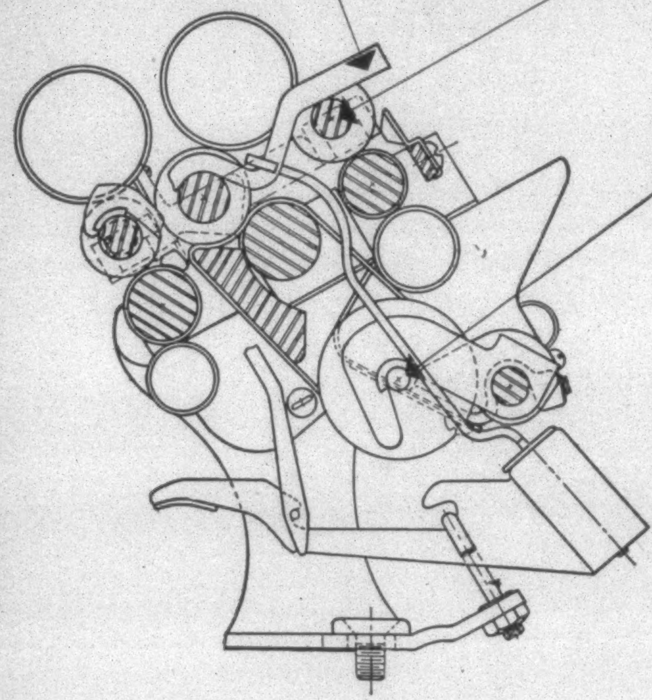
Back saddles of Nylon reduce arbor wear — do not need oiling.



Nylon end gudgeons on solid back top rolls require no lubrication — wear less.



Nylon inserts in tension roll supporting arms prevent wear which would spoil roll concentricity, apron alignment and even drafting of stock.



1. **Reduce Wear**
2. **Eliminate Lubrication**
3. **Decrease Roll Picking**

NYLON GUDGEONS AND INSERTS BY SACO-LOWELL

Saco-Lowell nylon gudgeons and inserts show little if any wear after long operating intervals. Since they require no lubricating, the absence of oil cuts dirty lint and subsequent roll picking to a minimum. This adds up to a very important saving in maintenance and operating costs.

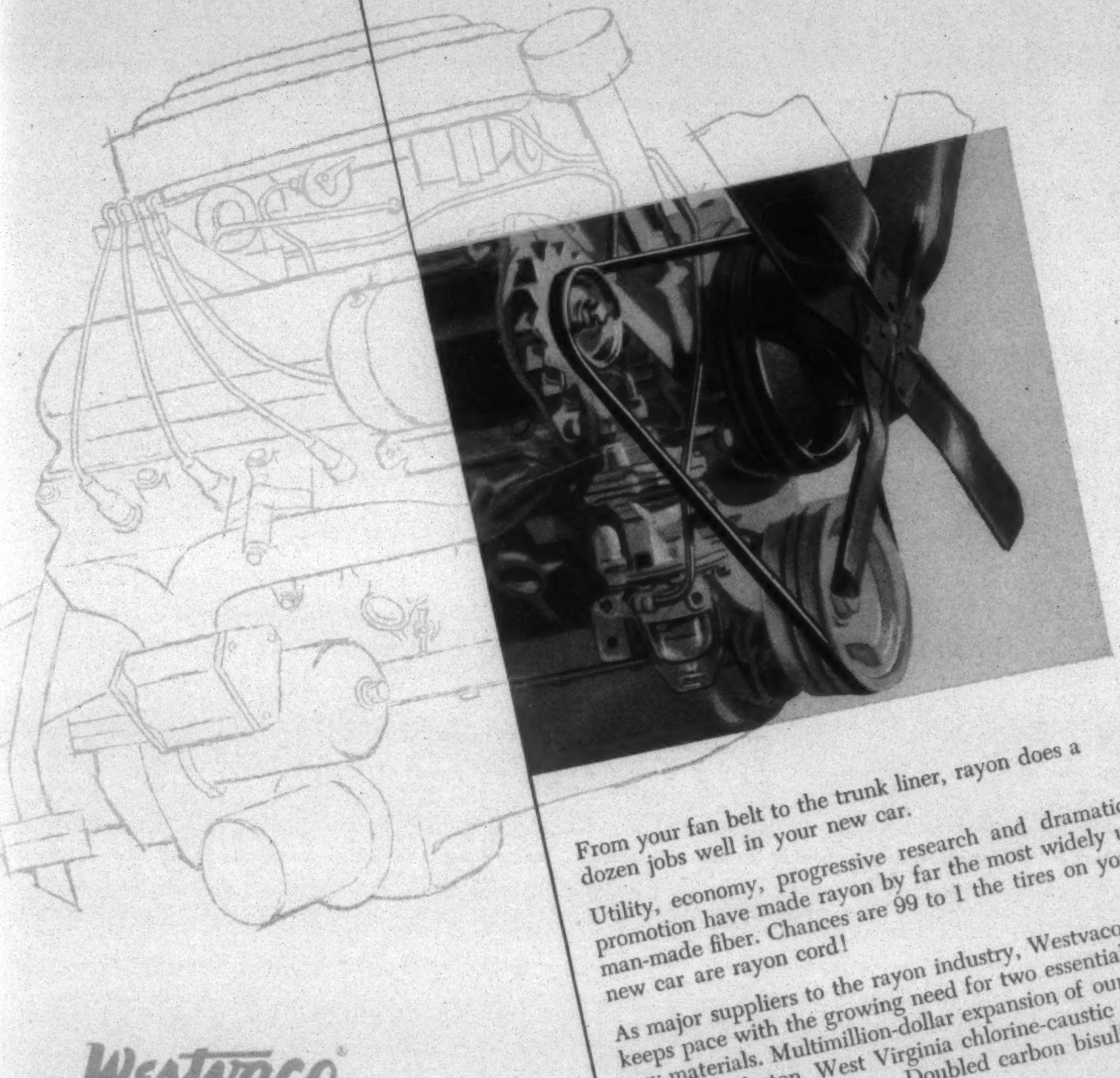
Check your solid back top rolls, back saddles and tension roll supporting arms for worn surfaces. If any have developed, change over to these new nylon gudgeons and inserts. They're low in cost and high in return on your investment. "It *Pays* to use genuine Saco-Lowell Replacement Parts".

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

Rayon cools 310 horses!



From your fan belt to the trunk liner, rayon does a dozen jobs well in your new car.

Utility, economy, progressive research and dramatic promotion have made rayon by far the most widely used man-made fiber. Chances are 99 to 1 the tires on your new car are rayon cord!

As major suppliers to the rayon industry, Westvaco keeps pace with the growing need for two essential raw materials. Multimillion-dollar expansion of our South Charleston, West Virginia chlorine-caustic plant is already complete. Doubled carbon bisulfide capacity is in early prospect.

Westvaco will continue to serve—and anticipate—the needs of all segments of the textile industry in the future as we have in the past.

Westvaco®

CAUSTIC SODA
CARBON BISULFIDE

Putting Ideas to Work

fmc
FOOD MACHINERY AND CHEMICAL CORPORATION®

FOOD MACHINERY AND CHEMICAL CORPORATION
Westvaco Chlor-Alkali Division

General Sales Offices:
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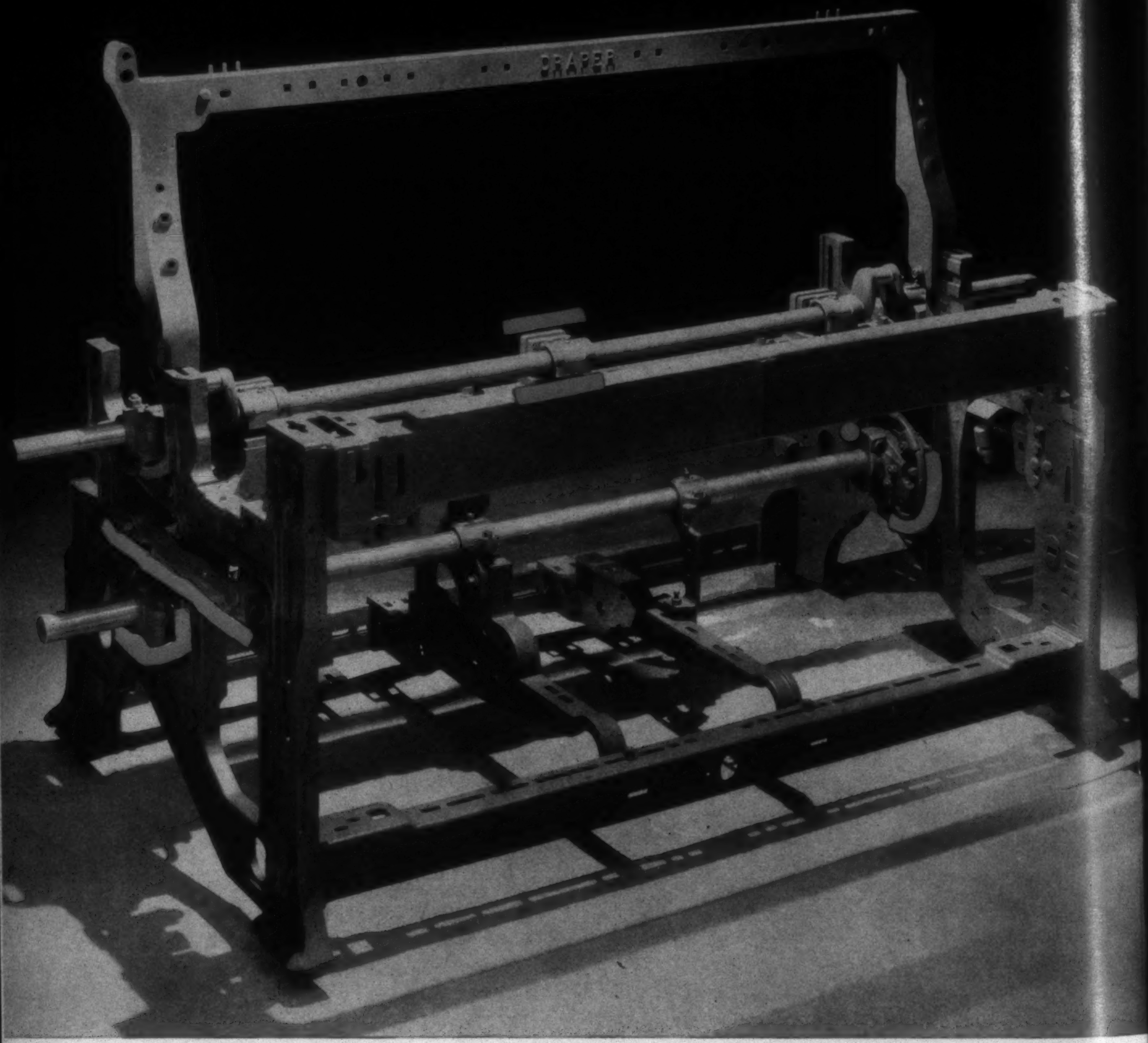
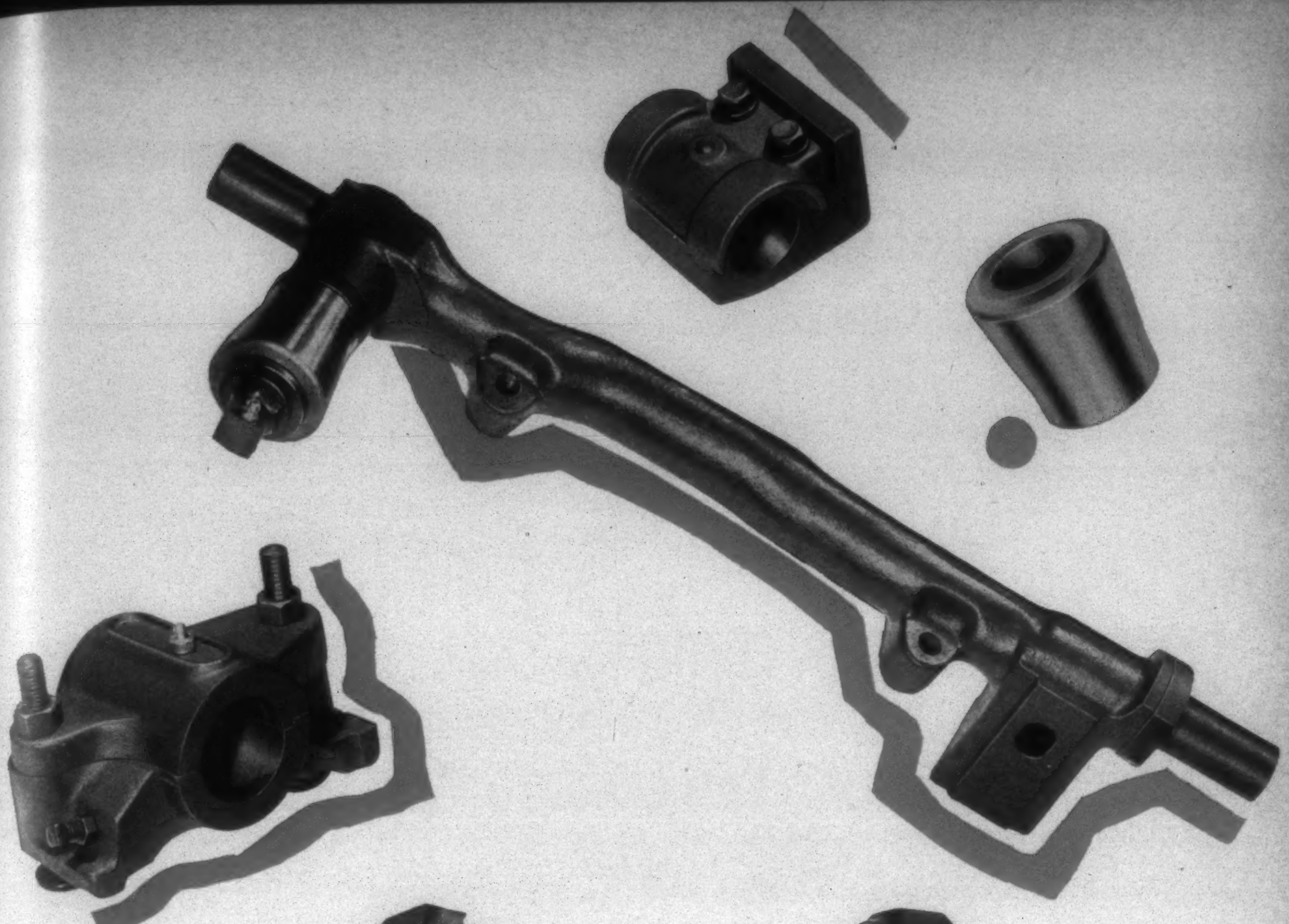
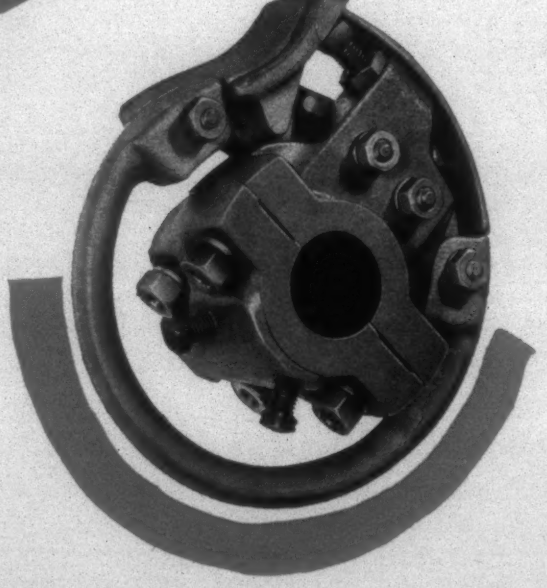
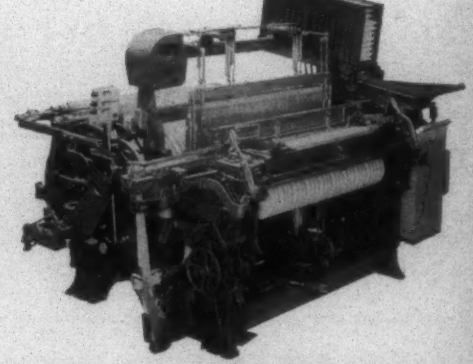


RIGHT FROM THE START! Since loom efficiency is, to a large extent, dependent on the individual performance of many parts, it is important that they be correct and properly applied. Each Draper part and mechanism is designed and built with one objective in mind . . . to give the maximum in service and dependability. — *Regular checks and replacement of worn or mongrel parts,* with *Draper Improved Repairs,* guarantee getting the most out of your looms.





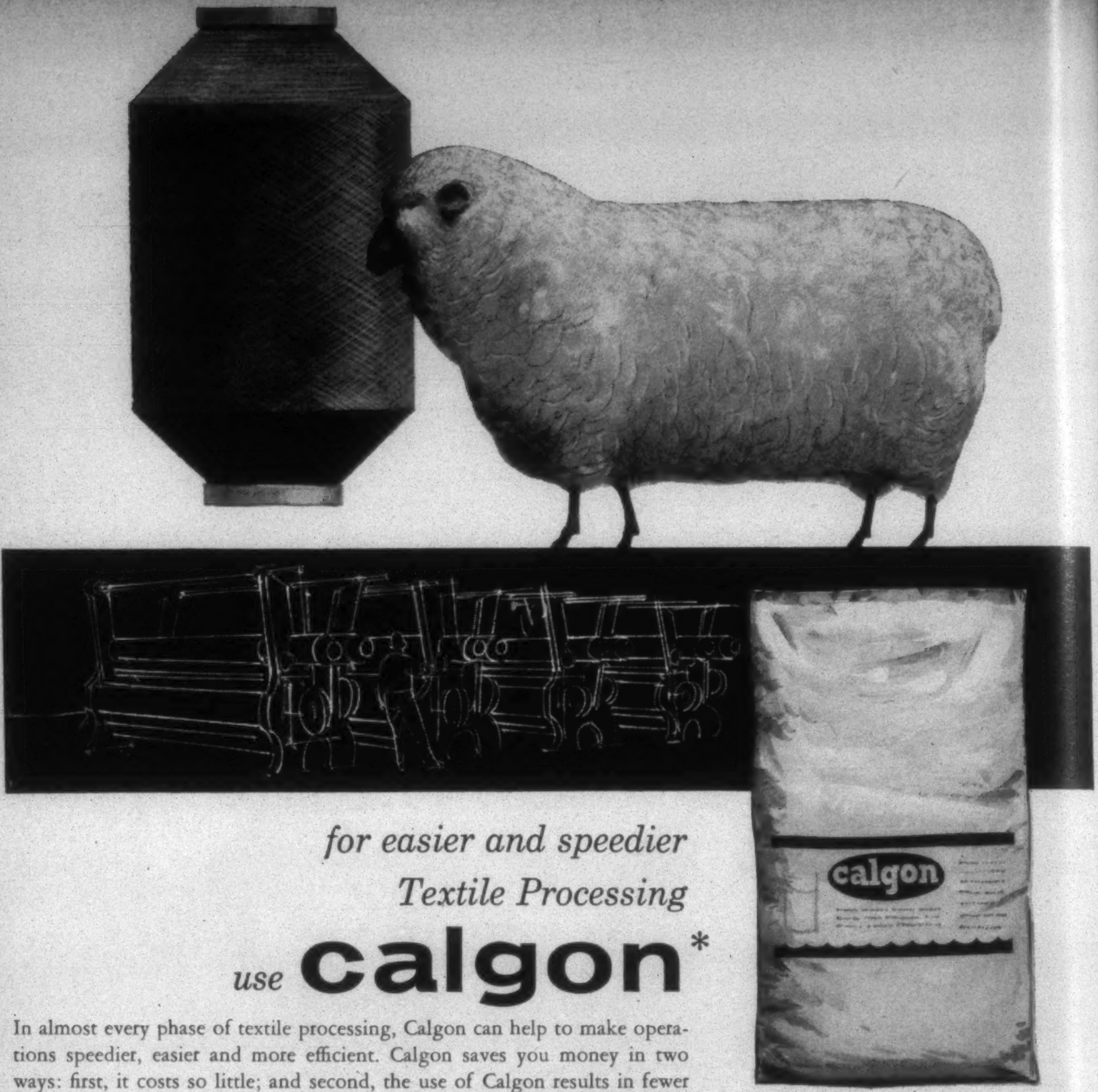
Illustrated are but a few of the many DRAPER IMPROVED REPAIRS *which enable you to produce more goods for less cost.*



DRAPER MODEL X-2
HIGH SPEED LOOM

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N.C. • SPARTANBURG, S.C.



for easier and speedier
Textile Processing

use calgon*

In almost every phase of textile processing, Calgon can help to make operations speedier, easier and more efficient. Calgon saves you money in two ways: first, it costs so little; and second, the use of Calgon results in fewer seconds, fewer re-dyes, less time in scouring and control of iron contamination. Write for the new brochure "Calgon Data for the Textile Chemist" today.

Here are some of the ways Calgon may be applied:

Calgon Conditions Water: Calgon prevents the formation of lime soap curds and acts as a solvent for lime soap as well. Calgon makes water rain-barrel soft.

Calgon In Scouring or Rinse Baths: Calgon supplements the detergent action of soaps and synthetic detergents. Calgon stops soap precipitation in hard water.

Calgon In the Dyebath: Calgon exerts a dispersive and solubilizing action on most dyestuffs and acts as a leveling and penetrating agent.

Calgon Disperses Pigments: Calgon is an excellent dispersing agent for clay, calcium carbonate, titanium dioxide and other pigments.

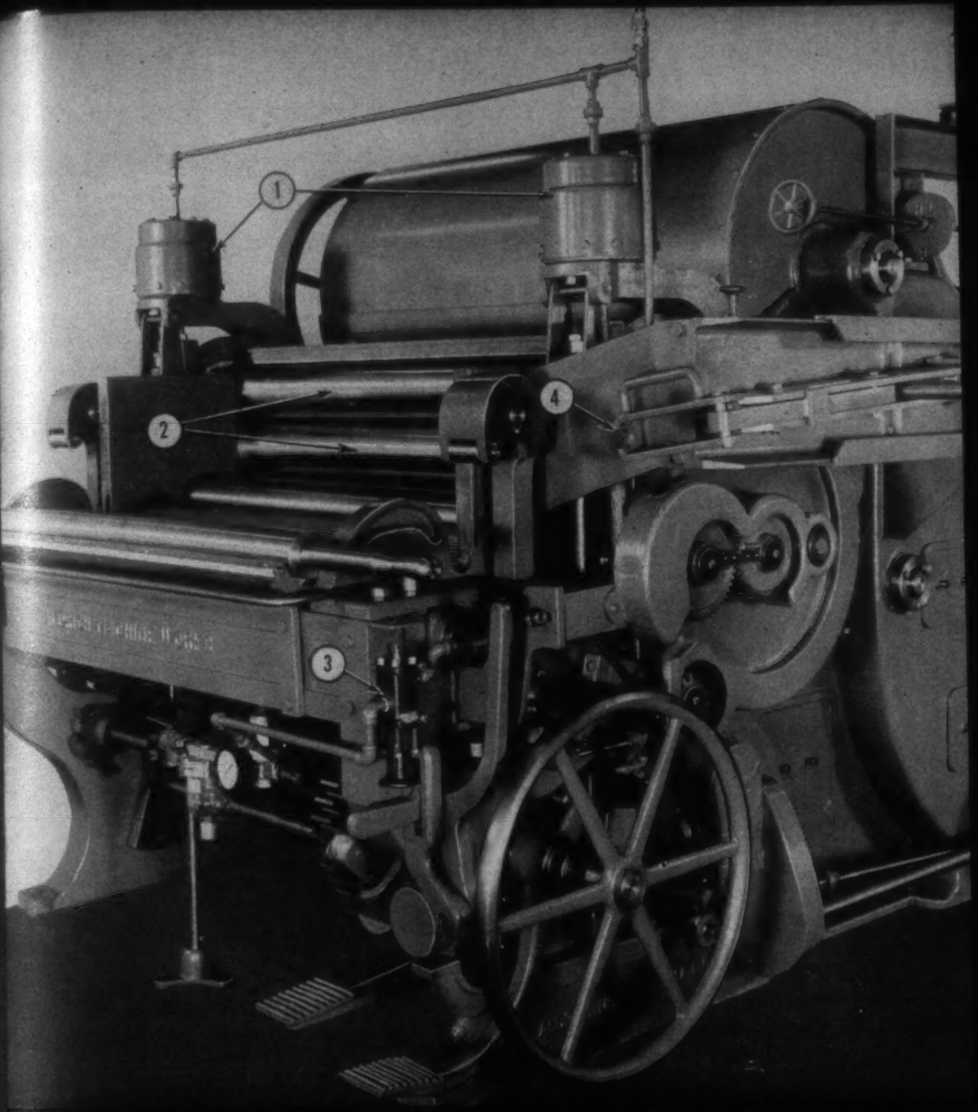
Calgon Penetrates Pigmented Rayons: Calgon assists the penetration of dyes in pigmented rayon resulting in deeper and brighter shades. Calgon stops scum formation assuring more even color.

Threshold Treatment for Corrosion Control†: Calgon prevents the contamination of process water from iron corrosion products. Calgon Threshold Treatment is the most economical and efficient method for eliminating iron contamination.

*Calgon is the registered trademark of Calgon Company for its sodium phosphate glass (sodium hexametaphosphate) product.
†Fully licensed for this use under U. S. Patent No. 2,337,856.

CALGON COMPANY

DIVISION OF **HAGAN** CHEMICALS & CONTROLS, INC.
HAGAN BUILDING, PITTSBURGH 30, PENNSYLVANIA
DIVISIONS: CALGON COMPANY, HALL LABORATORIES
IN CANADA: HAGAN CORPORATION (CANADA) LIMITED, TORONTO



① Diaphragm air cylinders, without pistons or rubbing heads, supply [illegible] adjustable pressures up to 10,000 pounds on the calender rolls.

② [illegible] calender rolls, which are [illegible] [illegible] roller bearings, [illegible] permit easy installation and provide maximum [illegible] capacity.

③ [illegible] pressure on the rolls [illegible] [illegible] operation [illegible]

④ [illegible] lap [illegible]

AldricH MachinE WorkS
Greenwood, South Carolina

A

ca

y

Armstrong Accotex Cots can help you keep yarn quality high

Accotex Cots can help you get maximum production of top-quality yarn from your high-draft frames by minimizing such sources of trouble and expense as lapping, eyebrowing, and irregularities caused by poor yarn control.

The broad line of Armstrong Accotex Roll Covers includes materials that are specially compounded to combat these common spinning problems.

For example, many mills have found that they can reduce front roll laps to a minimum with Accotex J-490 Cots. This cot contains electrolytes that actually tend to repel broken ends and prevent them from lapping.

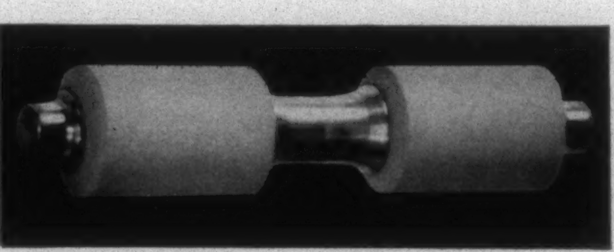
In mills where high static aggravates the lapping problem, one of the new anti-static Accotex materials is often the answer. These new cots are made especially to help control front roll lapping on equipment where non-metallic cap bars are used and where other metal-to-metal contacts have been eliminated.

Excessive eyebrowing in spinning room and card room has been eliminated in many mills by another Accotex anti-static material—NC-762. This new cot has an exclusive "constant-friction" surface that packs waste well back under the clearers. In addition, many mills report substantial reductions in the total amount of waste formed where the anti-static NC-762 cot is used.

With some types of equipment, it has been found that one of the softer Accotex Cot materials will improve break strength and reduce irregularities in the yarn.

Your Armstrong representative will be glad to work with you in the selection of the right roll covers for best performance on your equipment. Call him today or write Armstrong Cork Company, Industrial Division, 6508 Davis Avenue, Lancaster, Pennsylvania.

No matter what fiber or blend you're spinning, no matter what kind of equipment you have, there's an Accotex Cot that's specially designed to help you get top-quality spinning.



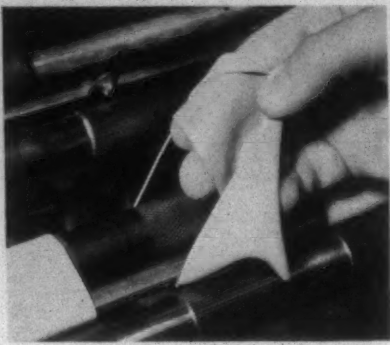
Armstrong ACCOTEX COTS

. . . used wherever performance counts

For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

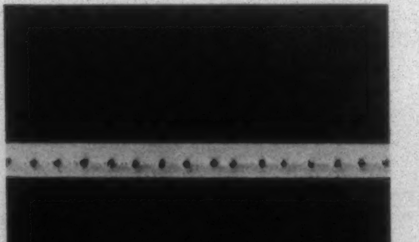
Bottom Apron



Armstrong Cork Co. reports that more durability and better fiber handling characteristics have been built into a new bottom apron called Accotex NO-7876.

A long-life bottom apron, proved over a two-year period in actual use, has been developed by the Armstrong Cork Co. to meet more exacting requirements of modern high speed long-apron spinning systems. The new bottom apron, called Accotex NO-7876, is made of two specially compounded Buna-N oil-resistant rubbers which were developed to meet the different requirements of the outside and inside of the apron. They are bound together by a patented seamless construction that uses a strong cord interliner to prevent stretching and curling.

The rubber on the outer surface is said to have great resistance to ozone and flex cracking in addition to the right fiber handling characteristics to insure good yarn control. Built-in electrolytes in the rubber compounds are designed to help reduce the build-up of fibers on the apron surfaces. Electrolytes neutralize electrical charges so that there is no attraction between the yarn and the apron surface. These charges are contained in the moisture layers found on fibers and drafting equipment exposed to mill conditions. Left alone, they would attract fibers on the surfaces of the apron. Armstrong reports that it has developed a patented system for building the electrolytes right into the rubber compounds.



A magnified cross-section of Armstrong's new bottom apron shows patented cord interliner which prevents stretching of specially compounded rubbers forming the outer and inner surfaces. Rubber on outer surface *(top)* has great resistance to ozone and flex cracking in addition to the right fiber handling characteristics to insure good yarn control. The inner surface *(bottom)* is made of an abrasion-resistant rubber that has unusual conformability to the drive roll knurling, insuring accurate tracking and full power transmission.

The inner surface is made of an abrasion-resistant rubber that has unusual conformability to the drive roll knurling. This is said to assure accurate tracking and full power transmission. A low co-efficient of friction on the inner surface allows the apron to run smoothly over the nosebar without tucking. (Request Item No. H-1)

Nonionic Softener

Hart Products Corp. has announced the availability of Softyne R, a new softener for use in all types of resin finishing of cottons and rayons requiring high temperature curing or mechanical polishing or embossing operations. Softyne R is said to be a nonionic softener with extremely high resistance to yellowing at high temperatures. It is said to produce desirable softness and lubricating, to be completely free of chlorine retention and to increase the sewability characteristics of treated fabrics. It is available as a pure white paste. Samples and technical data sheets can be obtained.

(Request Item No. H-2)

Dacron Type 64

The Du Pont Co. has begun commercial production of a new type of Dacron polyester fiber engineered to permit styling of a new broad range of fabric types. The new fiber supplements but does not displace the standard polyester fiber.

The company anticipates that the new product, called Dacron Type 64, will result in a large increase in consumption of Dacron in the important Winter apparel market. The new fiber will be suitable for worsted and rayon-type fabrics for men's, boys', women's and children's wear. Where at present the public is familiar with Dacron in clear-finished fabrics such as men's tropical suitings, Dacron Type 64 will make possible an extensive new range: sharkskins, Bedford cords, sheen and plain gabardines, and other types characterized by a surface nap such as mill-finished and unfinished worsteds, basket weaves and selected worsted and rayon-type flannels. The new type is intended for use on the worsted and American, or rayon, spinning systems.

Dacron Type 64 is said to show marked improvement in resistance to pilling, a characteristic that permits production of the new fabric types. Regular Dacron polyester fiber has somewhat higher tenacity and abrasion resistance, but Dacron Type 64 is said to have double the strength and greater abrasion resistance than the types of wool used in apparel. It reportedly offers greater dyeing versatility in that dispersed colors and selected cationic dyes can be used.

Dacron Type 64 polyester fiber is available in 3-denier per filament staple and tow and sells for $1.51 a pound, 10 cents more than the standard, Type 54 fiber.

(Request Item No. H-3)

Ciba Phobotex FTA

Phobotex FTA, Ciba's new finish for textiles, is said to be effective on all natural and man-made fibers. It may be applied alone or in combination with the urea formaldehyde or melamine formaldehyde resins for spot resistant, fully water repellent, drip-dry or wash and wear finishes. Ciba says that the use of Phobotex FTA in resin finishes gives greatly improved sewability, and in some instances it has been used for this effect alone.

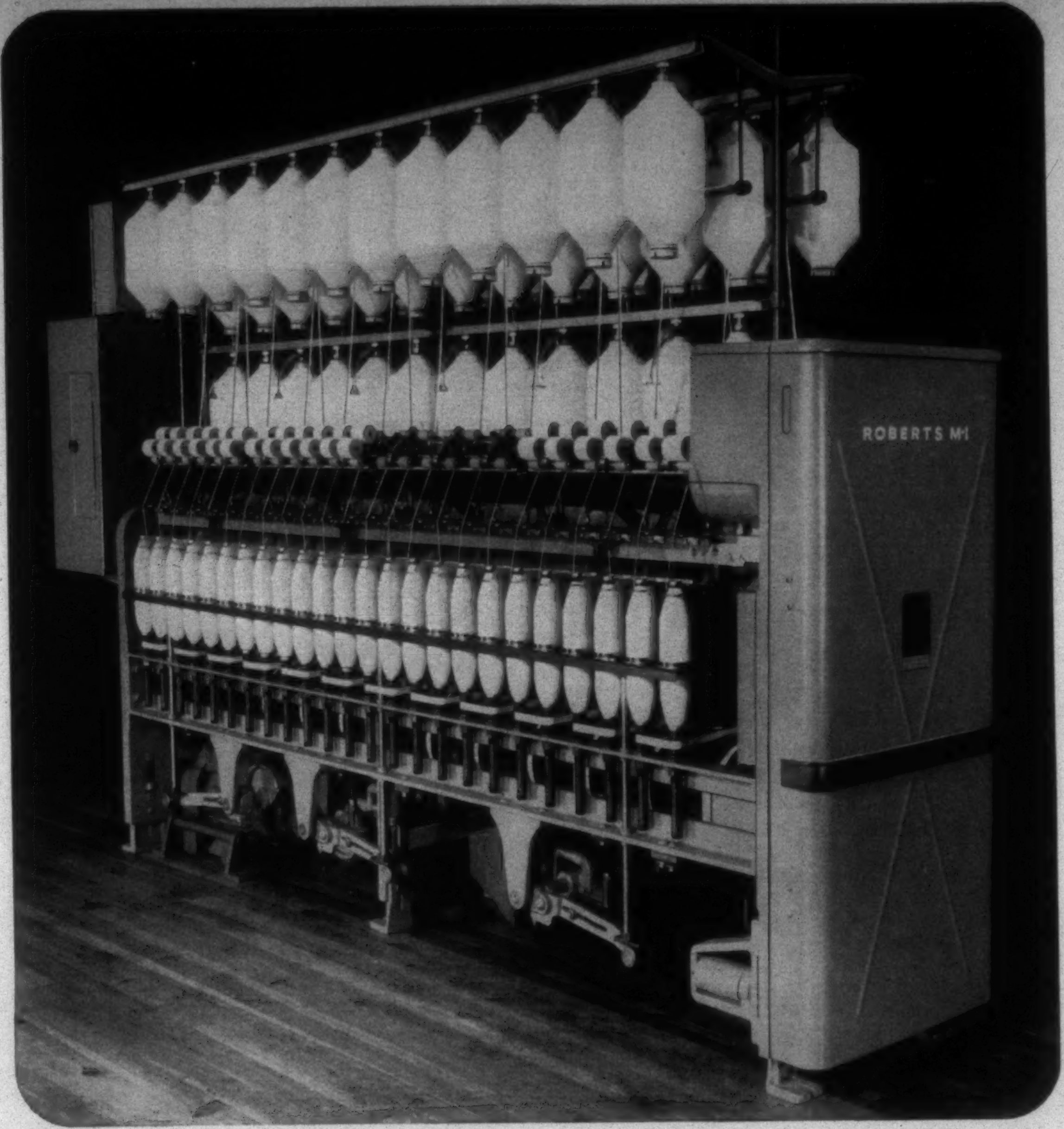
Application is very simple. It follows the usual procedures for applying the curing types of resins. However, the company reports no unpleasant odors develop during processing or storage, and it is not necessary to wash goods after curing. Phobotex FTA is supplied as a soft waxy material which is 100% active. It melts readily in hot water and in the presence of acetic or tartaric acid, forms a very fine, oil-in-water emulsion. Stock emulsions containing 25% Phobotex FTA may be stored for long periods. For full washfast water repellent effects, 4 to 5% Phobotex FTA should be applied on cellulosic and other natural fibers, and 2 to 3% on synthetic fibers. The use of 1 to 3% Phobotex FTA is said to be all that is required in combination with resin finishes to give stain resistance, improved hand and better sewability.

(Request Item No. H-4)

Laurel Sulfonated Oils

For all-around general utility, Laurel sulfonated oils—including Textile Oil (a 50% sulfonated oil produced from top grade castor oil), olive type oils and others made on request—fill a wide variety of needs in textile processing operations. Produced by Laurel Soap Mfg. Co., they are recommended for dyeing and bleaching, as kier boiling out agents, as emulsifiers, for pasting dyestuffs, and as finishing oils.

Laurel sulfonated oils — especially the Textile Oil—are said to be excellent dyeing assistants and levelling agents for hosiery and piece goods. They're used ef-



ROBERTS SPINNING

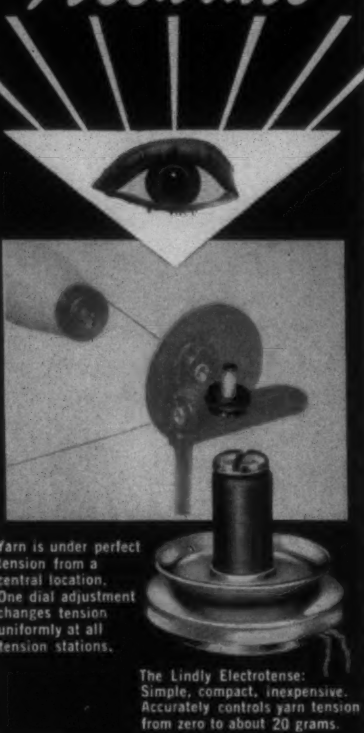
ALL NEW—ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

330 Roberts 25-inch Frames, with over 105,000 spindles, have been installed in American mills in the past wo years. These Roberts Frames are very ruggedly uilt and exceptionally simple in design. Only tried nd proven principles are used, which insure consist-nt high quality results.

Roberts M-1 Frames produce better yarns at higher front roll speeds and put more ounces of yarn on the bobbin. The ball bearing construction provides smoother operation plus reduced power use. Changes in draft, twist, lay, or speed are made very simply. Roberts M-1 Frames are available in 25-, 36- and 39-inch widths, for cotton, synthetics, worsted or blends, in short or long fiber lengths.

The benefits of big package
spinning are available at
$32 to $40 per spindle
including freight and installation

ROBERTS COMPANY
SANFORD, NORTH CAROLINA


Yarn is under perfect tension from a central location. One dial adjustment changes tension uniformly at all tension stations.
The Lindly Electrotense: Simple, compact, inexpensive. Accurately controls yarn tension from zero to about 20 grams.

Accurate

DIAL CONTROL of YARN TENSION at Any Number of Stations!

The Lindly ELECTROTENSE is the new, inexpensive, electro-mechanical way to control yarn tension from almost zero to about 20 grams. A turn of a single, centrally located dial applies desired tension evenly and simultaneously at all tension stations.

What are the advantages?

The Lindly ELECTROTENSE permits easy, instant change of yarn tension. It results in more uniform beams, more yarn per warp beam, less maintenance and machine down-time, fewer broken ends and better cloth.

GET THE FULL FACTS ON THIS NEW TIME-SAVING, QUALITY-IMPROVING, COST-CUTTING LINDLY SYSTEM. WRITE, WIRE OR PHONE TODAY!

It Pays to Know LINDLY the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

fectively on nylon, acetate, rayon, cotton or blends of these fibers, including operations where cross-dyeing effects are desired.

These oils, added to vat, naphthol and acetate colors during pasting, are said to give faster and more thorough dispersion. They are also said to do a fine job on pigment colors. In kier boiling, they promote a better, more uniform boiling out, besides helping to emulsify and disperse the waxes and gums for cleaner goods. Added to bleach baths, they materially assist the bleaching process, promoting faster wetting out and softer goods. They are also used as a drying aid for package-dyed yarns.

Sulfonated oils are excellent emulsifiers for pine and other oils, the company says, and, as cloth lubricants, eliminate or minimize chafing and the formation of cracks in the fabric. As finishing agents, they will often supply sufficient softness and lubrication to the goods when used in dye or bleach baths, or added to final rinse baths.

(Request Item No. H-5)

Sandoz Visco Black

Visco Black BAW is a new Sandoz dye for use on viscose and viscose acetate blends when a good acetate reserve is desired. Fastness to light, water, crocking, perspiration, dry cleaning and hot wet processing are said to be highly rated. It is recommended by Sandoz for viscose lining materials and viscose automotive carpeting. Sandoz customer leaflet T-8184 contains a swatch and figures on fastness.

(Request Item No. H-6)

Pleating Process

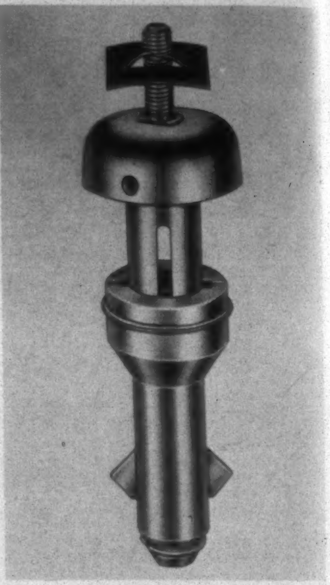
The development of a unique new method of pleating chemical textile or thermoplastic fabric blends has been announced by The Chemstrand Corp., producer of Acrilan acrylic fiber and Chemstrand nylon. Called the ChemPleat process, the new technique was perfected by Chemstrand's technical sales service department. According to the company, it is expected to provide the first practical solution to many of the pleating industry's problems created during the processing of chemical textile or thermoplastic fabric blends.

The new process is said not only to eliminate or appreciably reduce detrimental manifestations of cockling, puckering, rippling or bubbling in these fabrics, but also to produce sharper and more durable pleats. Furthermore, it is said to significantly inhibit the build-up of shine or glaze and afford greater control of the pleated fabric, paste that disperses readily in water with agitation at temperatures of 140° F. or higher. It has a high substantivity for cotton, rayon, nylon and other synthetic fibers in a dilute bath application—90 to 100% degree of exhaustion is obtained readily, according to the company's dyes and chemicals division.

Said to be suitable for use as a self finish and in conjunction with starches and various resin finishes, the new softener can be applied either by padding or by exhaustion from a long bath. Used with thermoreactive or thermosetting resins like Du Pont Zeset fabric stabilizer, it provides fabric finishes with improved tear strength and sewability. The softener is said to act as an effective plasticizer for thermoplastic resins which are used to obtain finishes semi-durable to laundering.

(Request Item No. H-7)

Bobbin Hanger



Hartford Machine Screw Co.'s new low cost bobbin hanger with positive latch.

Hartford Machine Screw Co., reports that it is now producing a low-cost bobbin hanger with positive latch under U. S. Patent No. 2,836,376. This top hanger for overhead creels is said to feature a sturdy cast body and anti-friction suspension of free-running ball construction. Bobbins are said to turn with complete freedom, so that the roving is protected from undue tensile strain and spinning can be uniform. Where required, a brake is available.

Creeling is faster, the manufacturer points out, since it is easier. The bobbin is very easily slipped up into place—this trips the latch to send from inside the hanger a pair of ears giving the bobbin positive support. When the bobbin is empty, another slight lift unlatches the ears, which snap back inside the hanger to release the bobbin. Cleaning is said to be simplified and effort is reduced.

(Request Item No. H-8)

Pump Motor Adapter

A new hydraulic pump motor adapter which makes General Electric's Tri-Clad '55 a.c. motors available as hydraulic pump motors has been announced by the company. The adapter fits on the end shield of the motors and permits the installation of almost any flange mounted hydraulic pump directly on the motor.

The adapter's open construction is said to eliminate hard-to-maintain internal splines. Auxiliary sheaves can be used with the coupling and adapter since sufficient clearance is provided. Another feature the adapter's cast-iron construction which is said to make the unit suitable for use in chemical and corrosive atmosphere.

The adapter also allows for cheaper installation since only the pump—rather than the pump and the motor—has to be lined up. The size of the adapter varies with the sizes of the motor and the pump to be used. The Tri-Clad '55 motors are available from 7½ to 125 h.p. and with standard ratings from 600 to 3,600 r.p.m. They feature improved bearing systems, double cooled ventilation, easier handling with sturdy forged eye-bolts, perma-numbered leads which simplify wiring and handy grease fittings to simplify motor relubrication. (Request Item No. H-9)

Sandoz Direct Scarlet

Claimed to possess the best fastness to light of any direct scarlet on the market, Pyrazol Fast Scarlet RL is a new dyestuff offered by Sandoz Inc. It assures a minimum of shade change in resin finishing, and its reserve of acetate is termed excellent.

(Request Item No. H-10)

End Seals For Expander Rolls

End seals furnished with Mount Hope Machinery Co.'s Free-Wheeling expanders to be used under wet, steamy or dusty conditions now feature a new, streamlined design with over-all contours smooth and clean-cut. A splash guard is provided for added protection against heavy spray of water. The seal itself is provided by water repellent grease which is applied through the grease fitting. The grease fitting is easily accessible. It remains stationary while the roll rotates, eliminating the problem of maintaining the grease seal, the company reports. This type of seal maintains the free turning qualities of the Free-Wheeling expander. The seal is available with both Fixed-Bow and Vari-Bow types of Free-Wheeling expanders.

(Request Item No. H-11)

Streamlined Cable Conveyors

A new streamlined trolley and wheel combination, specially designed for use with the Bush-Lock overhead cable conveyor, has been developed by The E. W. Buschman Co. for the textile industry. The new Type No. 138 Buschman trolley has a one-piece almag casting bracket of high strength, and uses only two bolts to connect the castings around the Bush-Lock cable. The rustproof trolley is said to have a minimum number of parts, making it ideal for operating under conditions where easy cleaning is required.

To further simplify maintenance, the exclusive Buschman W-13 wheel is offered. The new wheel is designed with smooth, flush outer contours to eliminate dirt pockets, and with a sealed lubrication feature. The lubricant-seal closure is said to permit the use of a minimum of grease for lubricating and sealing the bearing. This results in a free-running, low-friction, ball bearing wheel, necessary for low conveyor pull and longer conveyor life. It replaces fully-grease-packed bearings and plain bearings which have 2 to 4 times the friction.

The new components can be used on any existing Buschman Bush-Lock conveyor. The patented Bush-Lock design features rotary floating action for minimum wear and true alignment. (Request Item No. H-12)

Pillow Block

Recently introduced by The Fafnir Bearing Co., the new standard series LAKH pillow block ball bearing has been designed to meet specific customer requirements for varying over-all dimensions. Similar in design and load capacities to other standard series Fafnir pillow blocks, the LAKH features a wide inner ring ball bearing incorporating the famous Fafnir patented Mechani-Seal. Frictionless and wearless, the Mechani-Seal is an integral part of the bearing which is designed to keep lubricants in and foreign matter out. The new LAKH is self-aligning in any direction and can be installed immediately, the company reports.

(Request Item No. H-13)

Nylon Type 280

The Du Pont Co. is introducing a new, semi-dull luster nylon yarn, called Type 280, for use in automotive and home upholstery fabrics. Designed in response to

NON-FLUID OIL
TRADE MARK REGISTERED

AVOIDS SPINNING LOSSES

Change to NON-FLUID OIL and eliminate heavy losses from oil-stained yarn and replacement costs of oil-damaged roll covers and aprons. Drip-less and waste-less NON-FLUID OIL stays in roll necks where it belongs, preventing damage to roll covers and valuable yarn.

NON-FLUID OIL has adhesive qualities that enable it to stay in the bearings until entirely consumed. Every drop gives full lubricating service—and lasts three to five times longer than ordinary oils.

Stop damage by oil stains to goods in process . . . reduce oil costs . . . and check frictional loss of power and wear and depreciation of machines by using the full-time lubricant—NON-FLUID OIL.

Write for Bulletin T-13 and free testing sample of NON-FLUID OIL. Get more information at our Booth No. 109 — 20th Southern Textile Exposition, Greenville, S. C.—Oct. 6-10th. Why not make it a point to visit our display, and meanwhile try NON-FLUID OIL yourself.

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a growing demand for subdued luster in upholstery, Type 280 is said to be the first semi-dull nylon upholstery yarn designed to meet exacting dye lightfastness requirements.

Du Pont believes the new product will make possible many new styling effects, either when used alone or in combination with bright and dull luster nylon yarns. Its first important use is expected to be in bulked yarn fabrics. In addition to new styling possibilities, Type 280 nylon offers the advantages of standard nylon upholstery yarns, including strength, durability and resistance to moths and mildew.

Sample poundages of Type 280 nylon are now available, at the same price as that for bright nylon upholstery yarns. The technical service section of Du Pont's textile fibers department is prepared to work with mills in the selection of correct dyestuffs to achieve desired colors.

(Request Item No. H-14)

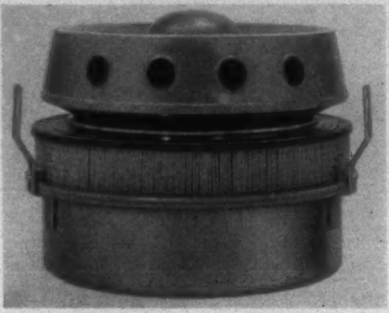
Fabric Yield Chart

A fabric yield chart that determines the yields of estimated widths of materials has been developed by the Textile Computer Co. The chart, which eliminates the need for slide rules and computing tables, is said to be accurate to ⅛ of a pound and ⅛ of a yard in yield percentage. The chart can be applied to any type of soft goods.

The chart is graded in yields from 4 ounces to a pound to one yard to a pound, and 4 ounces to a yard to 16 ounces to a yard in ¼ and ½ divisions. It is also graded from 6 ounces to 100 pounds in weight and 1 9/16 yards to 100 yards in length.

(Request Item No. H-15)

Walton Humidifiers



Walton Laboratories' new Model SF-5 humidifier embodies a new accordian filter which features 620 surface areas.

Walton Laboratories Inc., specialist in humidification, has announced a new line of humidifiers. The new Models SF-10 and SW-5 incorporate the firm's centrifugal atomizer which produces a fine water vapor without heat. Model SF-5 embodies a new accordian filter said to feature 620 surface areas. In extensive field tests this new filter was said to have assured trouble-free operation many times longer than other humidification systems.

The S-5 units evaporate 1 gal. of water per hour. Installation is said to be extremely simple, requiring only water and electrical equipment.

(Request Item No. H-16)

Silicone Softener

A new silicone emulsion designed specifically for softening thermosetting textile finishes is now available from the silicones division of Union Carbide Corp. Designated Union Carbide XLE-48 silicone textile softener, it is said to offer the advantages of durable softeners (such as high tear strength, abrasion resistance and enhancement of sewing properties) as well as increased durability toward repeated dry cleaning and washing, outstanding resistance to scorching, yellowing and water spotting, and complete resistance to chlorine damage.

The substance is said to have outstanding product and bath stability. It is nongassing and is compatible with other finishing materials. When used either alone or with other hand modifiers it makes available a full range of hand variations.

In addition, Union Carbide claims that the silicone possesses two important features not available in other durable softeners — outstanding resistance to wet soiling (redeposition of soil) and improved release of soil during laundering.

(Request Item No. H-17)

Bench Shaper

This precision South Bend bench shaper has pressure lubrication.

An improved 7" stroke precision bench shaper is now being manufactured by South Bend Lathe Works. Said to give smooth operation at high speeds, this shaper has been equipped with an automatic pressure lubrication system. A cam operated piston pump circulates lubricating oil from a large reservoir to all important bearing surfaces. Oil pressure is adjustable and can be maintained at all speeds. This is reported to cushion the shock of reciprocating ram action and interrupted cuts, resulting in exceptionally smooth and quiet operation even at maximum speeds. Length of ram stroke is adjustable, 0 to 7". Rocker arm shoe is graduated to indicate length of stroke. Stroke rates range from 42 to 19 per minute and cutting speeds from 3 to 114' per minute. Tool head has 3" feed and swivels to any angle.

(Request Item No. H-18)

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Trade name for DuPont's acrylic fiber.

IRREGULAR PAGINATION

For the Mill Bookshelf

Air Conditioning, Cleaning

Two booklets dealing with Parks-Cramer Co.'s systems for textile mills, including Certified Climate humidification and air conditioning, traveling cleaners and vacuum collection, have been issued by the company. Bulletin H15 is a file folder for keeping Parks-Cramer bulletins, which outlines the systems the company offers to the industry.

Bulletin H25 is a 16-page booklet describing central station air conditioning. It is fully illustrated and describes the layout of central station air conditioning and shows its application in various locations including opening, spinning, weaving, warping and in worsted preparation. The company reports that central station installation combines as many functions of complete air conditioning as may be desired, including controlled ventilation, air circulation, air washing, humidifying, evaporative cooling and, in many instances, heating, refrigerated cooling, dehumidifying, filtering and booster humidification. The heart of the system, the booklet points out, is the air washer, in which humidifying, cooling and air washing takes place. (Request Item No. H-19)

Machinery Mountings

A special booklet presenting "Facts About Anchoring Your Textile Machinery with Unisorb" has been published by the Felters Co. and represents results of a long study on engineering vibration control and isolation for all types of machinery. It covers all types of general machinery and includes examples, case histories, cost reduction results, vibration studies and deflection curves. (Request Item No. H-20)

Packaging Yarns

A new bulletin containing a chapter on the packaging of yarns with corrugated containers has been issued by Hinde & Duch. Called "Package Laboratory News," the bulletin describes how Industrial Rayon Corp. uses two completely different corrugated packages for safe shipment of its high-quality rayon yarn and cord.

(Request Item No. H-21)

Ovens, Dryers, Heaters

The J. O. Ross Engineering Division of Midland-Ross Corp. is offering a new 8-page, 2-color booklet describing Ross ovens, dryers and heaters used to produce the engineered atmospheres required for textile drying.

Containing more than two dozen photographs, the booklet illustrates applications of Ross equipment in providing many services throughout industry.

Included in the booklet is information on Ross indirect oil or gas fired heaters, a shell type direct air heater, a tubular type indirect air heater, and the Ross Supertherm high pressure hot water heating system.

(Request Item No. H-22)

Overhead Conveyor

The conveyor division of The American MonoRail Co. has published a new 44-page Catalog CDA describing its American Cable-Way overhead conveyor. Features of the Cable-Way are low cost, ease of installation, quiet operation and long life.

The catalog contains 10 pages of installation photos. Also illustrated are all of the components of the Cable-Way system. Information in the catalog is complete enough to engineer a Cable-Way conveyor of any size.

(Request Item No. H-23)

Planned Lubrication

Keystone Lubricating Co. has announced the availability of a new bulletin titled "Keystone Planned Lubrication." Identified as BK-19-a, it provides a pre-tested, pre-established list of correct lubricants for a number of specific types of equipment operating under normal conditions of speed and temperature. This aids in the selection of the right lubricant for the job and also shows how the majority of plant requirements can be met with a minimum of different lubricant types and densities.

(Request Item No. H-24)

Polyvinyl Acetate Emulsions

A new technical bulletin titled "Textile Finishing With Celanese Polyvinyl Acetate Emulsions" is currently being offered by the plastics division of Celanese Corp. of America. The new bulletin (NP-28) describes results obtainable with Celanese polyvinyl acetate emulsions in finishing fabrics of cotton and of man-made fibers. It includes a description of the emulsions, their advantages and application procedures. Information on storage and handling and compounding materials and sources also is included. (Request Item No. H-25)

Industrial Trucks

The first annual product review issue of its external house organ, "The Lift," has recently been published by The Elwell-Parker Electric Co.

This issue, said by the company to be one of the most complete publications on industrial trucks ever presented, covers 86 items on specific trucks plus available free literature. Products, both illustrated and described, include fork trucks, high and low-lift platform trucks, crane trucks, plus a wide variety of special models, specifically engineered to solve particular handling problems. Truck attachments are also covered.

All information is arranged in easy-to-read form and a postage-free return postcard is included for obtaining additional information. (Request Item No. H-26)

Public Relations

A 16-page booklet titled "The Power of Public Relations," designed for management executives and organization officials, has been published by Max Rogel Inc., New York public relations firm. The booklet points up the importance of public relations in today's economy and describes what objectives a public relations and publicity program can be expected to achieve for industry. It also includes four case histories of special public relations projects executed for industrial clients by the Rogel organization along with a history of the 25-year-old agency. (Request Item No. H-27)

Anti-Static Lubricant

An anti-static lubricant for processing synthetic filament yarns is discussed in a technical bulletin issued by Nopco Chemical Co. Called Nopcone AR, the product is a balanced coning oil approved for use on yarns such as Du Pont's Taslan and Joseph Bancroft's Ban-Lon. Added to its anti-static effects, the bulletin states, Nopcone AR is low in viscosity, has good spreading power and is easily removed. Goods treated with Nopcone AR and then stored will not become rancid or yellow, even after long periods. (Request Item No. H-28)

"Accident Facts"

The 1958 edition of "Accident Facts," the National Safety Council's statistical yearbook, is now available. It contains facts and figures on all types of accidents—industrial, traffic, motor transportation, home, farm and school. Several sections of the annual publication are devoted to occupational accidents, and provide a comprehensive background for an industrial safety program. The book contains a list of accident rates by major industry groups, as well as charts showing the trend of accidents. Other topics listed include most common source of work injuries, part of the body most often injured, off-the-job accident problems, and how unsafe acts and unsafe conditions contribute to permanent impairment and death. According to the council, the 96-page book provides ideas and facts for making speeches, writing articles, preparing reports and planning safety campaigns. Quantity prices can be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

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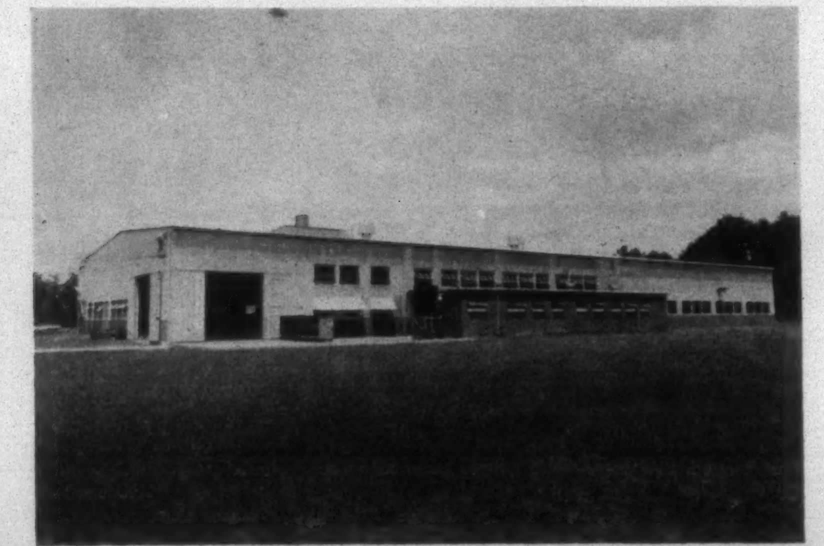
Serving The Textile Industry

West Point Foundry Moves To New Quarters

In order to meet the growing demand for bigger and better casting facilities, the West Point Foundry & Machine Co. of West Point, Ga., has transferred its foundry operation into a new building. The modern structure located on the outskirts of West Point on a Chattahoochee Valley Railway spur, contains over 17,000 sq. ft. of working area. New melting facilities have been installed with automatic controls on the air blast to the cupola. New equipment has also been added to the molding facilities with provisions being made for still further installations at a later date. In addition, outside storage quarters have been set up to house raw materials and sand necessary for efficient operation of the foundry.

West Point, a slasher specialist, originally operated its foundry to produce gray iron castings used in the manufacture of its complete slasher line, its corduroy machinery and its finishing equipment. Now, according to R. L. Mundhenk, sales manager, the new building and equipment enables the company to supply the rough casting trade with castings of less than 1 lb. up to approximately 2,000 lbs.

Howard Mayberry has been appointed foundry superintendent. Mayberry's experience in metallurgical control and the mixing of special irons assures casting customers of up-to-date knowledge in the field and also permits West Point Foundry to produce better irons to meet the needs of its own shop. L. R. Alford, who is also well versed in casting operations, has been named foundry foreman. According to Mundhenk, plans also have been made to erect additional buildings in the future to house all of the manufacturing operations of the company in this one convenient area. West Point Foundry & Machine Co. is a division of the Batson-Cook Corp.



This new 17,000-sq.-ft. building houses increased casting facilities of West Point Foundry & Machine Co.

Victor Ring Traveler Shifts Sales Office To Greenville

Victor Ring Traveler Division of Saco-Lowell Shops will transfer its Southern office and stockroom from 914 East Franklin Ave., Gastonia, N. C., to its new location on Whitehorse Road in Greenville, S. C., effective September 1. The new location provides ample space for a major expansion of stockroom facilities required to meet the increased need for Victor travelers by Southern mills. It will also permit improvements in office operations, planned to expedite order-handling and delivery. The Greenville office will be headquarters for Victor's Southern sales manager, Walter L. Hudson, and Victor's Southern staff of representatives, who will continue to serve the areas to which they are presently assigned.

Carolina Brush Co. Merges With Gastonia Brush Co.

The Carolina Brush Co., Charlotte, N. C., has combined and merged with Gastonia (N. C.) Brush Co. in a move which was effective August 1. The new company will operate as the Carolina Brush Co. under the direction of Carolina's management. All manufacturing, service and research departments are being combined, expanded and established at the location formerly occupied by the Gastonia company. All management, sales and direction for the merged firms will be centered in the Charlotte location of Carolina Brush at 414 Arlington Ave.

The merger brings together two of the oldest brush companies in the South. The new company will continue to furnish a complete line of brushes designed exclusively for use in textile mills and will also concentrate and expand services for all types of heavy industrial and institutional brushes. Carolina Brush was founded in 1919, five or six years prior to the establishment of Gastonia Brush.

James S. Smith, who has been president of Carolina Brush since 1933, has been named president of the merged firm. J. C. (Jack) Hawkins has been field representative for Carolina Brush for several years and has been named sales manager for the new firm. The company has sales representation in South Carolina, Georgia, Alabama and Texas.

Hayes Textiles Appointed Rodney Hunt Sales Agent

The Rodney Hunt Machine Co., Orange, Mass., has announced the appointment of Hayes Textiles Inc. as exclusive sales representative for its full line of textile wet finishing machinery and industrial rolls in the Southern U. S. region.

With headquarters in Spartanburg, S. C., the full organization of Hayes sales engineers will provide complete service and engineering assistance for Rodney Hunt customers and prospects from Virginia and Kentucky south to Alabama. Hayes will also maintain warehousing facilities for stocking replacement parts for the Rodney Hunt line.

American Viscose Forms New Fibers Division

Gerald S. Tompkins, president of American Viscose Corp., has announced the formation of a new unit to be called the fibers division, a consolidation of the company's rayon and acetate divisions. Concurrent with this major organizational move, Tompkins has also announced the following organizational changes: Henry H. Bitler, vice-president and a director of the corporation, has been promoted to the newly created office of vice-president and general manager of the fibers division. He formerly served as staff assistant to the president. Paul E. Hill of Meadeville, Pa., formerly general manager of the acetate division, will become the fibers division's director of manufacturing. George L. Storm, whose responsibilities until this time have been limited to rayon products, will assume the position of vice-president and sales manager of the new fibers division.

Geigy Dyestuffs To Move Charlotte Office To Suburbs

The Geigy Dyestuffs division of Geigy Chemical Corp. is moving its Charlotte office to the suburbs after 30 years in leased

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quarters near the downtown area. Bids have been asked on the construction of a building to house sales and business offices, testing and servicing laboratories and a warehouse in a $700,000 modernization and expansion program. The new site is located about four miles from downtown Charlotte between the old and new routes of Highway 16. The branch is presently located at 528 West 11th St.

The Du Pont Co. Expands Nylon Production Unit

The Du Pont Co. has announced installation of new production facilities to increase significantly the output of Du Pont 420 nylon and permit expansion of the new fiber into a wider variety of market end uses. Du Pont 420 nylon, introduced a year ago, is said to impart longer wear to cotton and rayon fabrics. The new facilities were installed in Du Pont's Seaford, Del., nylon plant.

American Cyanamid Opens New Sales Headquarters

American Cyanamid Co.'s fibers division and the textile chemicals department of the company's organic chemicals division has opened modern sales headquarters at 111 West 40th Street, New York City. The new offices, selected to bring the Cyanamid organizations into the heart of New York's textile area, comprise about 20,000 sq. ft. of space, covering the entire 16th floor of the recently completed building.

Included in the new quarters will be the offices of fibers division management; sales, merchandising, advertising and promotion offices, display rooms and other facilities for improved service to textile industry customers. The fibers division, headed by Alden R. Loosli, general manager, will begin limited marketing of Creslan, Cyanamid's acrylic fiber, to the trade this Fall. Production of the fiber on a limited commercial scale will begin late this year at a modern, multi-million dollar plant now under construction in Santa Rosa County, near Pensacola, Fla. Upon completion, the plant will have an annual capacity of 27 million pounds of Creslan staple and tow.

Zefran Production Begins At Dow Chemical Co. Plant

Commercial production of Zefran, The Dow Chemical Co.'s acrylic alloy fiber, has begun near Williamsburg, Va. After a start-up period of five weeks, the new Dow plant officially came onstream when Zefran began rolling off one fabrication line. In the coming months full production will gradually be reached to attain a rated capacity of 12 million pounds a year. Cost of the plant, which has been under construction for 18 months, is estimated at over $10 million.

Zefran staple fiber produced at Dow's James River Division will be delivered to textile mills in the South, middle Atlantic area and New England and will be used to support the launching of Zefran this Fall in the apparel field. This initial production climaxes a nine-year effort by Dow which began in 1949 at Pittsburg, Calif., where the company's Western division chemists began the process of screening hundreds of polymers (long-chain molecular compounds) to find a new and useful textile fiber material.

First fibers were made in California on improvised laboratory equipment and were extruded through a hypodermic syringe into a water-filled cafeteria tray. Dow estimates that the first fabrics made from Zefran were obtained at a cost of $10,000 per yard.

The production of Zefran involves the preparation of a polymer which is predominately acrylonitrile (a derivative of air and natural gas), spinning of the fiber and a crimping operation. The tow (or continuous fiber filament) is then cut into specified staple lengths and packed into bales. During the process other materials are added to provide outstanding dyeability and processing characteristics. Once baled, Zefran is then ready for shipment.

Dow calls Zefran an "acrylic alloy." Although Zefran is related to the family of fibers known as "acrylics," it has sufficient differences in its composition, Dow feels, to justify the "alloy" designation. This difference is the result of Dow's special method of introducing a dye-receptive component into the fiber which gives Zefran greater flexibility in the choice of dyestuffs without sacrificing inherent physical properties including its resistance to pilling, its dimensional stability, its pleasing hand and its ability in fabric form to retain a fresh appearance after long and hard wear.

Curtis & Marble Machine Co. Opens New Southern Shop

Curtis & Marble Machine Co., Worchester, Mass., manufacturer of cloth room machinery, has moved into its new Southern sales and service shop on U. S. Highway 276 near Mauldin, S. C. The firm had maintained a downtown sales office in Greenville since 1924. The new building is a $50,000 structure containing some 5,000 sq. ft. of space. Walter F. Woodward, vice-president of sales, will supervise the Southern operation. Sales manager of the Southern unit is Jack Federline.

Roanoke Plant To Be Closed By American Viscose Corp.

American Viscose Corp. has announced plans to discontinue operations at its plant in Roanoke, Va. An orderly curtailment of manufacturing is being planned to be effective as soon as practical. No specific dates were set. Some 1,750 employees are now working at the plant. A plan for the termination of the employment of these people is being studied.

The Roanoke plant started operations in 1917 to manufacture continuous filament yarns used in apparel and decorative fabrics. Although total consumption of cellulosic fibers has been increasing through the years, the company pointed out that its customers are requesting different types of these fibers than those for which the Roanoke plant is equipped to produce.

American Viscose has adequate production facilities at its plants in Lewistown, Pa., and Parkersburg, W. Va., to fill customers' requirements for continuous filament yarns. These two plants have also been operating on a curtailed basis for the last few years. The over-all effect of the Roanoke shutdown will be to consolidate productive capacity. No decision has been made as to ultimate disposition of the Roanoke plant property.

R. M. Turner Co. Named Stedco Agent

R. Michael Turner Co., Clinton, S. C., has been named exclusive sales representative in South Carolina for Stedco Southern Inc., Greensboro, N. C., subsidiary of Steel Heedle Mfg. Co., producer of automatic loom bobbins. The Turner Co. will also service accounts in Augusta, Ga. Mike Turner, head of the firm, is well-known in the South Carolina area.

Daniel Construction Co. Opens New York Office

A new office in New York City was opened August 1 by Daniel Construction Co., Greenville, S. C. The office, at 375 Park Avenue, represents an increased effort by the company to provide information and assistance to companies presently located in the North that are considering expansion.

The company, with offices in Greenville, Birmingham, Richmond and Jacksonville, specializes in providing industry with detailed information as to their requirements in locating in the most favorable industrial climate in the Southeast.

Lower Profits Reported By Dow For Fiscal 1957

The Dow Chemical Co. has reported sales of $636,201,143 and earnings after taxes of $46,059,181 for the fiscal year ended May 31. Both figures represented declines from the preceding year when adjusted for income of The Dobeckmun Co. which became part of the Dow organization during the year.

President Leland I. Doan noted that earnings were particularly disappointing "due to a combination of reduced levels of operation and the continued pressure on profits inherent in the cost-price squeeze." The company also bore heavy start-up expenses at its new plant in Louisiana and its new synthetic fibers plant in Virginia.

Non-sales income of approximately $9 million brought up Dow's total income to $645,161,000. Depreciation was up slightly at $82,383,709 and the company invested an all-time high of $185 million in new capital additions. For the current fiscal year it estimated capital additions in the range of $75 million.

Net Income Is Up At Celanese Corp.

Celanese Corp. of America and its domestic subsidiaries have reported net income of $3,191,635 for the three months ended June 30, 1958. The three months' earnings were 18% above earnings during the same 1957 quarter of $2,701,070.

The company's net sales during the second quarter of 1958 were $54,822,291, representing a 13% increase over the $48,4[illegible],060 sales volume of the comparable three months last year. Net income after taxes for the first six months of 1958 amounted to $5,701,345 as compared with net income of $5,613,890.

Harold Blancke, president, reported that although general business conditions had affected the company's chemical and plastics sales, Celanese textile yarn and fiber sales during the first half of 1958 exceeded those of the like period last year, having increased steadily each month this year.

General Aniline & Film Transfering Technical Lab

In a move to emphasize and consolidate the research program of the dyestuff and chemical division of General Aniline & Film Corp., transfer of the major section of the division's technical laboratory in New York to the company's central research laboratory in Easton, Pa., has been announced.

In the main, the New York laboratory, which served both General Dyestuff Co. and Antara Chemicals, will be integrated into an applications research and technical service function of the research department.

All of the laboratory's functions with the exception of that concerned with pigments and customer service in support of the New York-Philadelphia and export sales offices will be transferred to the Easton laboratory.

New Acrylic Acid Plant Opened By B. F. Goodrich

Production is now under way at the newly completed Good-rite glacial acrylic acid plant of B. F. Goodrich Chemical Co. in Calvert City, Ky. The new plant brings glacial acrylic acid into quantity production for the first time in this country, according to John R. Hoover, president. The new unit has a capacity of several million pounds per year. When polymerized alone or as the major ingredient with other monomers, Good-rite acrylic acid results in water-soluble resins used as textile sizes.

Sharp Drop Shown In American Viscose Profits

American Viscose Corp. has reported sales of $96,391,000 and earnings of $429,000 for the first six months of 1958. This compares with sales of $118,047,000 and earnings of $6,155,000 for the corresponding period last year. In the second quarter, sales amounted to $47,023,000 versus $53,910,000 last year. In addition, American Viscose's equity in the earnings of its 50% owned associated companies — The Chemstrand Corp. and Ketchikan Pulp Co.— amounts to $.66 per share compared to $1.10 for the first six months of 1957.

In a letter to shareholders, Dr. Frank H. Reichel, chairman of the board of directors, and Gerald S. Tompkins, president, noted that the low rate of general business activity continued to affect the corporation's operations. Unsatisfactory prices, reduced shipments and low rates of production caused earnings to decline.

Sales and earnings of The Chemstrand Corp. improved in the second quarter when earnings increased to $4,491,000 as contrasted with $1,885,000 for the first three months of 1958. The larger earnings were due principally to the increased demand for nylon.

Pfizer Terminates Fiber Plant Option

Charles Pfizer & Co. has terminated an option it held on the research and the fiber plant of Virginia-Carolina Chemical Co. Pfizer took the option several months ago on the plant in Taftville, Conn., and considered entering the fiber field. Carl A. Setterstrom, special projects manager for Pfizer, has resigned from the company over policy differencies involving the option. He had been with the company for three years and had previously worked for Union Carbide Chemicals Corp.

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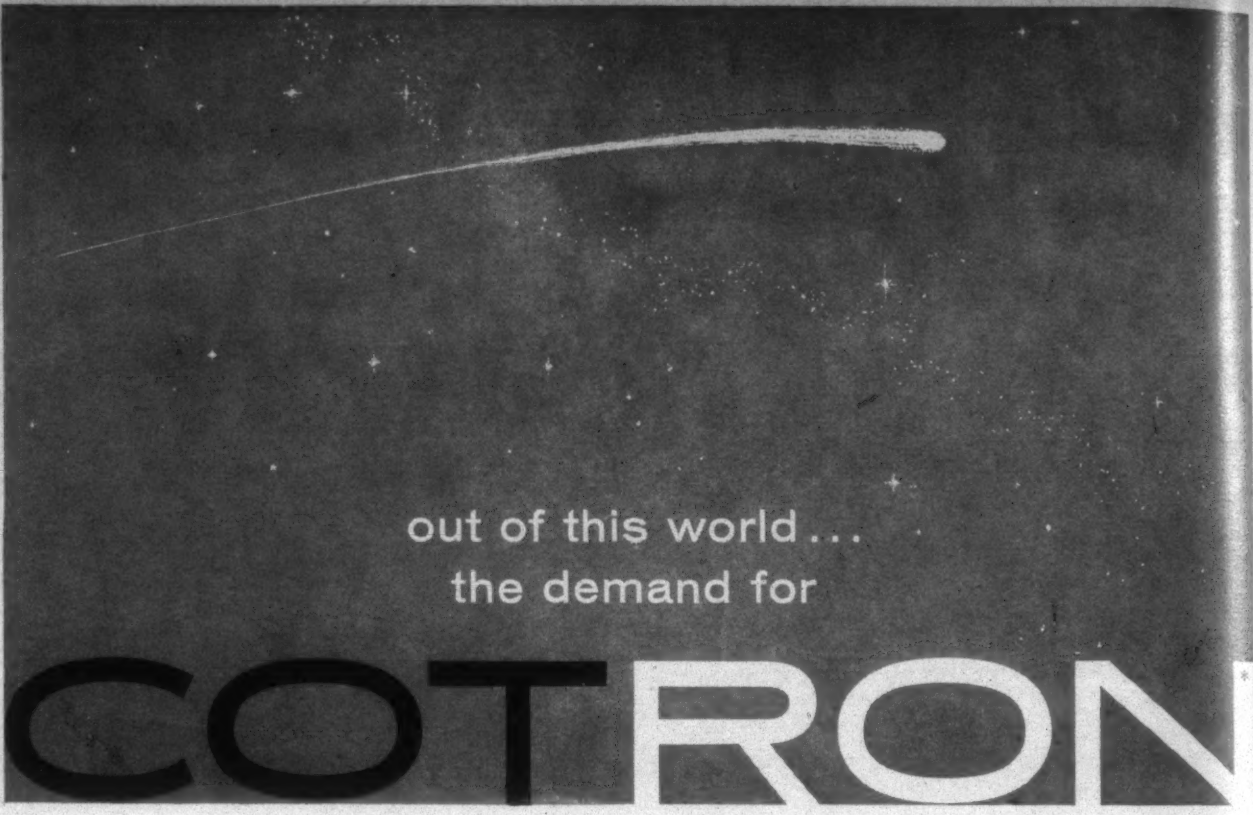

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• Richer Lustre • More Luxurious Hand • Brighter Colors
• Better Drape • Whiter Goods • Improved Light Fastness
• Better Definition of Print Pattern

. . . and here are two more reasons—but just as important:

Resinated COTRON compared to resinated all-cotton fabrics shows

• Greater strength after repeated laundering
• Marked improvement in strength retention after repeated laundering with chlorine bleach

The American Viscose Corporation is planning big 4-color, double-spread national magazine ads, trade ads, complete department and specialty store promotions, window and in-store displays, dealer mat ads, statement inserts—*the whole works!*

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AVISCO®

textile bulletin

OL. 84 AUGUST 1958 NO. 8

Saturation Bonded NONWOVEN FABRICS

By FRANCIS M. BURESH, Textile Consultant

This discussion covers in detail another specific type of nonwoven fabric manufacture known as pad or saturation bonding. Our current series follows the brief descriptions in the special report on current activities in the field of nonwoven textiles which appeared in Textile Bulletin, October 1957. The first method described in detail was high loft or spray bonding, discussed in the April issue.

BY present count there are now 51 nonwoven fabric manufacturers in the U. S. including six that are either in the pilot plant stage or are synthetic fiber producers doing research. In addition there are 15 foreign nonwoven manufacturers. Of the above domestic firms a large majority (approximately 65 per cent) are finishing by the pad or saturation method while the balance finish by the high loft or spray bond method, fiber bonding, powder bonding and needle felting. In a few cases the manufacturer is equipped to finish by more than one system.

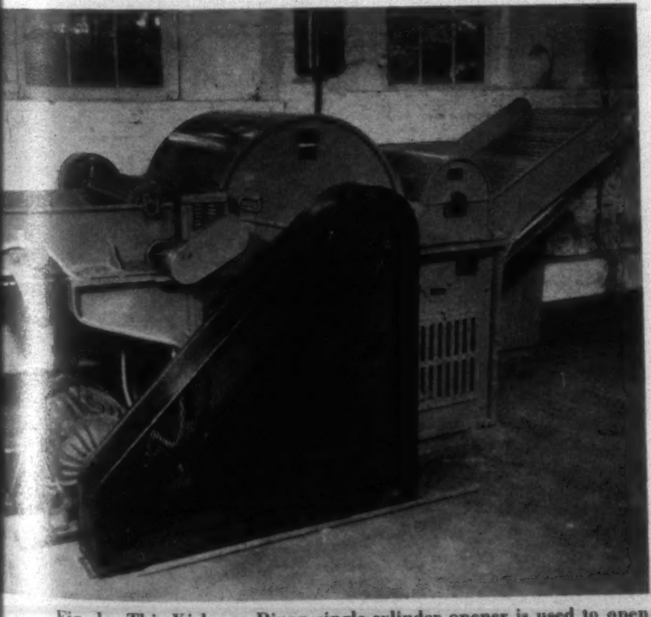


Fig. 1—This Kirkman-Dixon single-cylinder opener is used to open the stock fed to the hopper of the Rando-Feeder.

The photos and sketch accompanying this article represent an actual mill installation of a 60-inch fabric width nonwoven fabric line with pad or saturation bonding. The stock flow in the sketch reads from left to right. The machines shown in the sketch are: (1) Kirkman-Dixon single cylinder opener; (2) Curlator Corp. Rando Feeder and Rando Webber, model 60B; (3) Rodney Hunt double screen saturator; (4) infra-red gas fired drying and curing oven, Granco; and (5) fabric winder. The over-all length of the equipment shown is 85 feet. A minimum floor space of 100 x 16 feet with 12-foot head room is required plus working area and storage space for raw stock and finished fabric.

Costs

The line, as shown, costs approximately $73,000 for machinery plus $30,000 for installation, site preparation, service facilities (drains, electric, air, water) plus engineering expense. Here again, as we pointed out in our last report, one must be ready and willing to spend an additional sum of money to get the line started up, develop successful products and obtain satisfied customers.

The production rate of the line varies between 80 and 200 pounds per hour of finished fabric or 100 to 600 linear yards per hour depending upon stock used, weight of the product (can be varied between 1.25 and ten ounces per square yard) and quality level required. Generally, higher poundages can be obtained on the medium and heavy weight products.

Under good operating practices with well trained personnel, operating efficiencies can reach 85 per cent on one shift operation and up to 90-92 per cent on two or three shift operation. Good production practice requires a complete blowdown of the web forming equipment every four hours plus a thorough flushing of the saturator screens. All of this can be accomplished in a 10 to 15-minute servicing period. The Rodney Hunt double screen saturator is equipped with Emerson shower pipes to facilitate automatic screen flushing. In the "Special Report on Nonwoven Textiles" in the October 1957 issue of this journal a complete

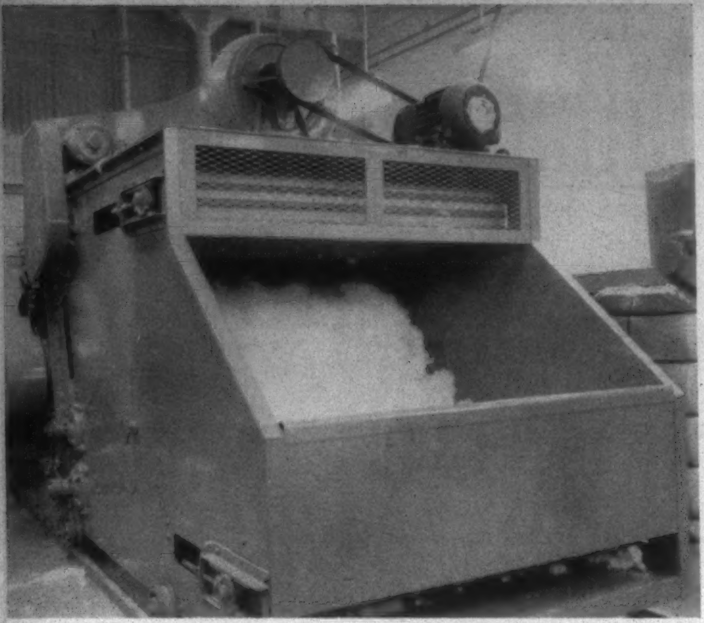


Fig. 2—The Curlator Corp.'s Rando-Feeder is equipped with wheels mounted on rails to facilitate cleaning on it and the Rando-Webber.

description was given of the Rando-Feeder, Rando-Webber and Rodney Hunt saturator.

The oven shown is a Granco gas fired infra-red and convection type having a series of ceramic burners located above the wire conveyor. Indirect fired gas ovens may be used as well as steam heated ovens if the mill steam pressure is at least 175 p.s.i. Oven operating temperatures as high as 350 to 400 degrees F. are required to properly cure some polymer binders. Electric ovens are not used in the saturation method as they are for spray bonding which was described in an earlier article (April 1958). The type of oven chosen depends on the economics of the various heat sources as well as the mill's preference.

Products

Fabrics made on this type equipment are used for:

A. Industrial and automotive
  1. coated fabrics
  2. dessicant bags
  3. filters
    - air—industrial, carburetor
    - chemical
    - milk
    - oil
    - water
  4. gaskets
  5. laminating plastics
    - door panels
    - lamp shades
    - tarpaulins
    - tents
    - swimming pools
    - wall coverings
  6. laminate overlays
  7. reinforcements
    - building panels
    - high pressure laminates
    - molded articles
  8. tapes
  9. wiping cloths

B. Apparel
  1. coat fronts
  2. interfacings
  3. laminates
  4. outerwear (experimental)
  5. patterns
  6. shoe fabrics
    - box toes
    - insoles

C. Bedding
  1. mattress felts

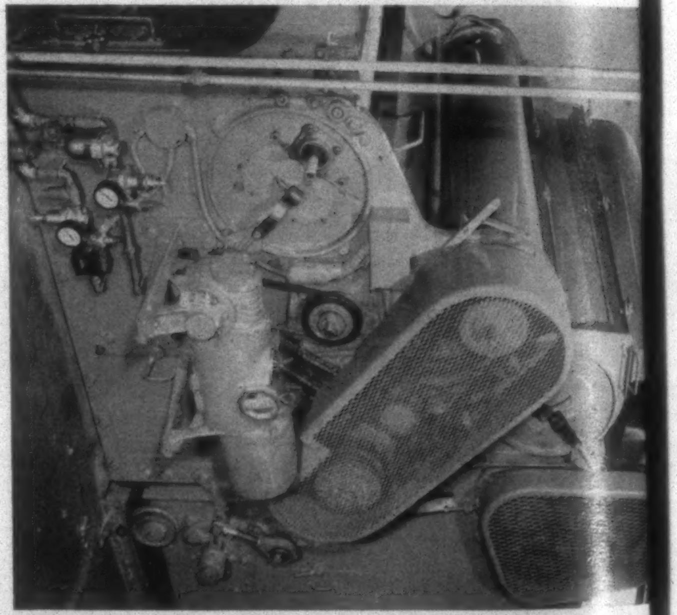
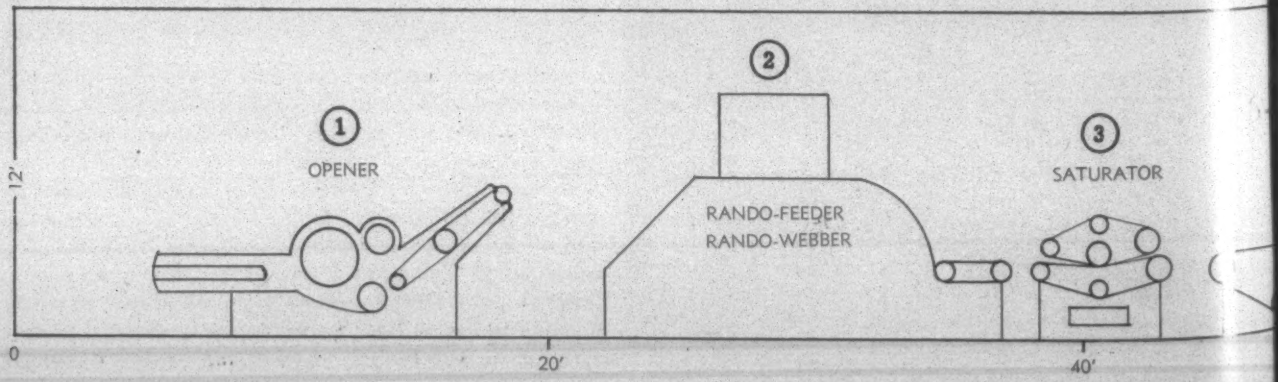


Fig. 3—This photograph shows the delivery end of the Model 60-B Rando-Webber.



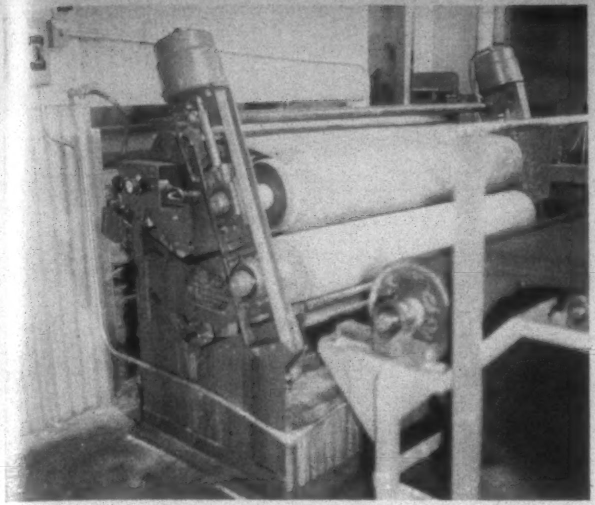


Fig. 4—This photograph shows the delivery end of the double screen saturator made by the Rodney Hunt Machine Co., Orange, Mass.

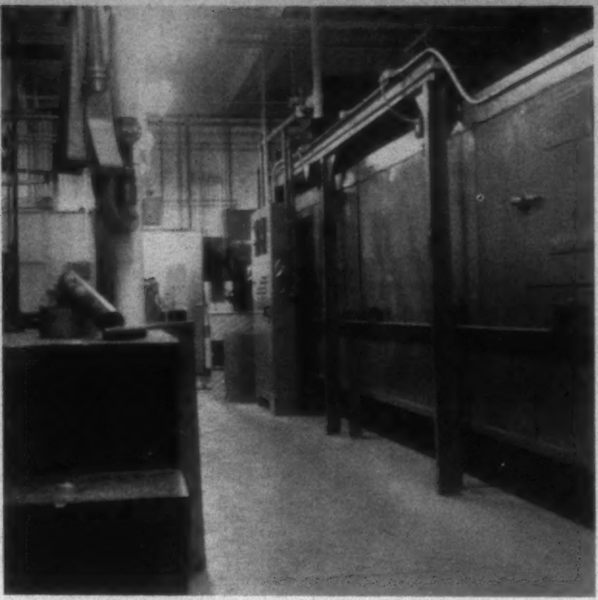


Fig. 5—This view of the drying and curing oven shows the saturator in far background. The stock flow is from left to right.

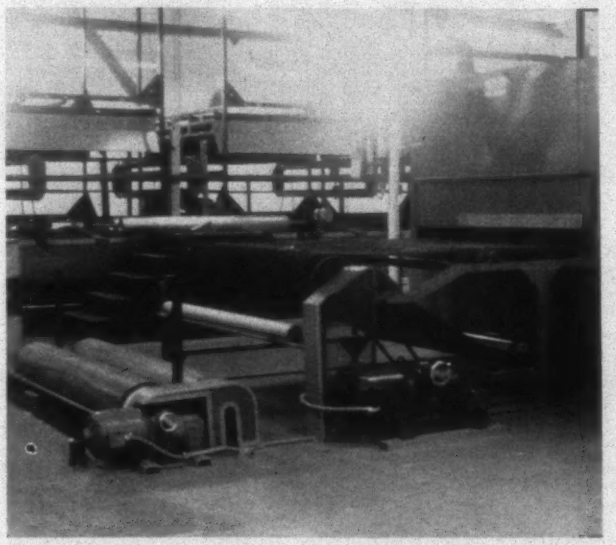
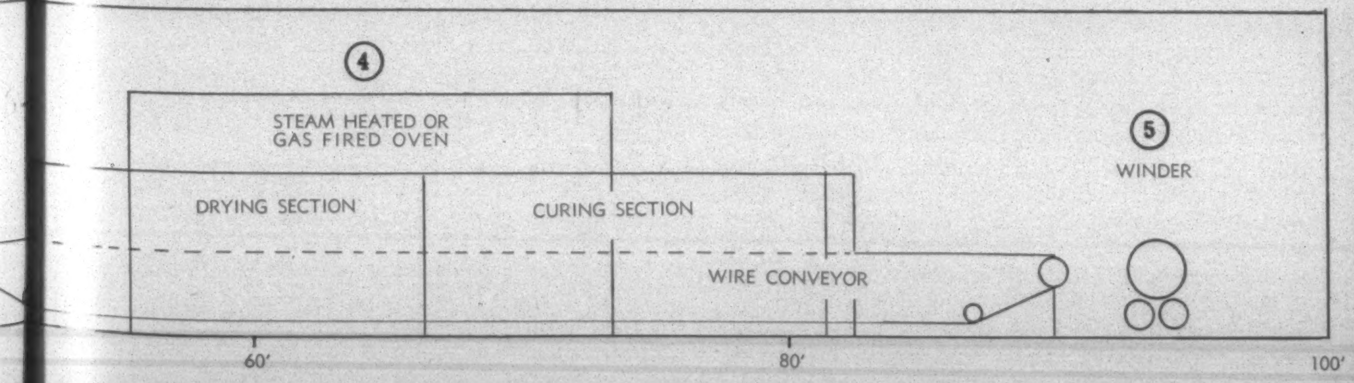


Fig. 6—The dried and cured nonwoven fabric comes out of the oven and winds onto rolls on this winding machine. Both the conveyor screen through the oven and the winding machine have variable speed drives so that proper tensions may be kept on the fabric.

  2. mattress pads
- D. Household items
  1. chamois
  2. curtains
  3. draperies
  4. disposable towels
  5. ribbons
  6. tape
  7. tea bags
  8. tufted rug backings
  9. napkins
- E. Disposable surgical and personal
  1. absorbent pads
  2. personal items
  3. towels
- F. Miscellaneous
  1. casket padding
  2. luggage fabrics

Fibers

Cotton, viscose, acetate and wool are the big volume fibers in the saturation field. Synthetic fibers account for only about 20 per cent of the present production but this market is growing as more specialized custom engineered quality non-disposable fabrics are being developed. Nylon is the work-horse of the synthetics. Acrylic fibers (Acrilan, Orlon, Dynel) and Dacron polyester fiber are being used to some extent. Here, as in the high loft field described in the earlier article, a great deal of blending of two or



more fibers is common as well as the careful blending of various deniers, lengths, crimp levels, etc.

Binder Systems

The chemistry of the binder systems is an art in itself and it is not within the scope of this article to go into detail on this score. Suffice it to say an experienced rubber chemist working in co-operation with the major chemical suppliers is a *must* for a successful operation. Most firms do their own blending and compounding of the water emulsions used. The important systems in use are the nitrile rubbers, acrylics, polyvinyl chloride, and polyvinyl acetate with melamine, zinc oxide and sulphur cures used for washability and drycleaning resistance where required. The fiber-binder ratios can vary between 90 to 10 and 60 to 40, generally runs about 20 to 25 per cent. If a binder add on of 40 per cent is required for a very firm stiff fabric it is usually accomplished by double padding or re-saturation.

Conclusion

The pad or saturation method of nonwoven manufacture will probably be the most popular one in use for some time to come because the resulting fabrics most closely approximate woven and knitted fabrics in their appearance, physical properties and end use applications. A broader range of products can be made on this system than by the other finishing methods. The method, so far, has not been promising in producing a satisfactory apparel outerwear fabric. It may be that new production techniques based on synthetic fiber needle felting, chemical bonding, heat shrinkage, etc., will point the way to a technological break-through to strong, soft, abrasion resistant, durable, outerwear fabrics.

U.S.D.A. Spinning Laboratory, Knoxville, Tenn.

Cotton Research: Here's How It's Done In A Government Lab

This is a report of a visit to the U.S.D.A. spinning laboratory in Knoxville, Tenn. The purpose of the laboratory is to test new varieties of cotton developed by plant breeders and geneticists of the Agriculture Research Service Corps but many other forms of research work are undertaken. The various steps in performing spinning tests are explained in this look at an efficient and effective research installation.

THERE is a center of cotton textile research on the campus of the University of Tennessee, Knoxville, which is wide in scope and active in nature. The three research segments are not connected directly, two being government installations and the other a part of the school's physics department, but their operations are keynoted by co-operation in the highest sense of the word.

The Routine Fiber Testing Laboratory is a U. S. Department of Agriculture facility which has as its purpose the testing of fibers to define the properties of new varieties of cotton. Plant breeders and geneticists from both Federal and State agencies send samples of new varieties from all over the country to the laboratory. It is equipped to handle some 30,000 fiber tests per year and could handle more if the need arose.

Seven persons are employed in the Routine Fiber Testing Laboratory. The samples are routed through six testing instruments in a sequence based on motion and time studies. The fineness of the fiber is first tested on a Port-Ar. The sample is then passed to an automatic Fibrograph and two curves are made. The two Fibrograph combs are passed to one of two Stelometers and two breaks each are made on them. The results of the four breaks are combined and averaged for greater accuracy. The four Stelometer samples are also combed and weighed on a Roller Smith Balance and passed to an Arealometer for further fiber characteristic definition.

The fiber laboratory in the physics department of the school is dedicated to pure research in testing, and instrument research and development. It is headed by Dr. K. L. Hertel and is basically aimed at improving the value of the cotton crop. The laboratory is credited with the development of many fiber testing instruments such as the Port-Ar. Speedar, Arealometer, Stelometer and Fibrograph.

Spinning Laboratory

The third research facility located on the campus is the U.S.D.A. Cotton Spinning Laboratory. P. R. Ewald is the engineer in charge of the laboratory whose "customers are plant breeders and geneticists of the Cotton and Cordage Fiber Research Branch of the Agriculture Research Service Corps, Research Division.

This laboratory takes samples of new varieties of cotton and processes them into yarns to give the breeders information on spinnability. In addition, a great deal of ingenuity is used in research into better methods of fiber testing and processing. Included in the special equipment designed and built by the laboratory are a miniature opener, beta ray gauge evener motion for drawing, sliver-to-yarn spinning, instrument for measuring yarn diameter, miniature

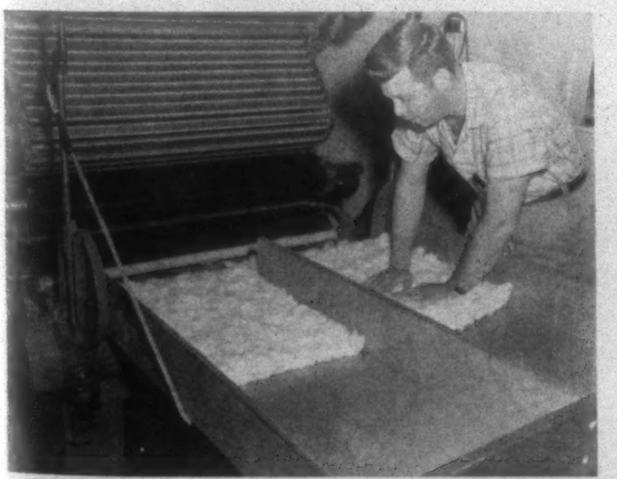
The cotton spinning test routine starts with the feeding of the sample into a miniature opener which contains a high speed beater and a set of grid bars.

skein winder, skein strength tester adapted for miniature skeins, laboratory size slasher with hot air dryer and many others.

One of the features of the laboratory is a library of over 1,000 samples of different varieties and staple lengths of cottons. All fiber properties have been measured and spinning tests have been made on the samples. The library makes available for research many combinations of various fiber properties. The samples are neatly packaged in miniature bales and all information relating to the sample is contained on an index card which stays with the sample.

Spinning Test Routine

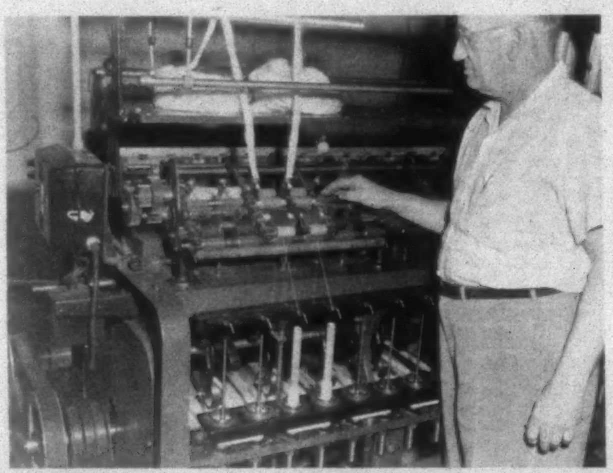
The spinning test routine is started by feeding a cotton sample into the miniature opener which contains a high speed beater and a set of grid bars. The sample enters the top side of the opener and moves across the length of the machine before being blown out the back side into a caged-in area. The sample is then hand prepared into ½-pound laps in a specially built card feed trough. The trough is designed so that two laps may be processed in the card at the same time. The card is fitted with a coarse metallic covered feed roll similar to those found on garnet machines. It has a double coiler and vacuum stripping device.



The opened fibers are hand-fed in ½-pound laps in a specially built card feed trough which is designed so that two laps may be processed simultaneously. The carded samples are run on a single-delivery draw frame which has a specially built bottom second roll to grip the fibers more efficiently. All sizings are done in the Tex system. Roving and spinning are done by conventional methods.

The sample of 40-grain card sliver is split into six pieces and placed behind a single delivery drawing frame. The second roll of this frame is made after an English design which improves gripping of the fiber and permits better fiber control. A special roll setting method has been devised and incorporated in the frame by Herbert Hutchens of the laboratory staff. This system uses a set of skims and makes roll setting simple and exactly reproducible.

The sliver samples are then processed on a roving frame, with special roll setting systems, and made into yarn on a conventional spinning frame. All sizings made on the stock as it is processed and the yarn are done in the Tex numbering system. This system is said by C. B. Landstreet, cotton technologist, to allow greater speed and greatly facilitates the work of the laboratory. All results reported for last year's crop tests were reported in Tex.



Herbert Hutchens looks over the segment of the conventional spinning frame at the laboratory which is converted to sliver-to-yarn spinning. Called the V.H.D. unit, the device uses four rolls, cradle and aprons, and a unique condenser. The frame is shown producing 15.75s yarn with a draft of 80 from carded 1-1/32-inch cotton.

Sliver-To-Yarn Spinning

A segment of the conventional spinning frame in the laboratory is converted to sliver-to-yarn spinning. Called the V.H.D. unit (very high draft) the device uses four rolls, cradle and aprons, and a unique condenser. A back draft of four plus is achieved in the unit. The frame is currently making 15.75s yarn with a draft of 80 from carded $1\frac{1}{32}$-inch cotton. The evenness and breaking strength of the yarn is good. The frame was devised and built to further speed the test spinning of samples. By using it the laboratory can eliminate its roving operation and give results on cotton spinnability much more quickly.

A system of double-trumpet spinning having a good effect on the strength of the yarn was developed by the laboratory. As Mr. Landstreet explains it, in this process the roving is double creeled and passes through the bite of the back rolls through two separate trumpets set some distance apart. The rovings remain in this separated position all the way through the drafting zone and up to the point of departure from the front rolls. A V is formed as the two strands are joined into one as twist is put into the stock. The twist in the body of the yarn causes each of the elements of roving to become twisted immediately upon leaving the bite of the front rolls. The elements are twisted into small cylindrical yarns which, in turn, are twisted together to form the finished yarn at the vertex.

There are three outstanding features of the system: (1) yarn strength is greater than conventionally spun yarns; (2) when plotted, the maximum strength plateau is elongated; and (3) the location of the twist multiplier for maximum strength shifts its position on the curve.

The major usefulness of the process in the mill seems to be in the spinning of yarns near the high side of the twist multiplier range. It is here that yarn strength is greatly increased over yarns spun by conventional methods. In evaluating new varieties of cotton for spinning qualities at the laboratory, the flatness of the twist-strength curves produced by the double-trumpet method is important.

Twist-Strength Curve

Other work of the laboratory has been the development of a curve to determine the twist multiplier which gives maximum strength to the yarn. The curve is based on the cotton's fineness and length as found by the Arealometer and Fibrograph, respectively. The fiber length is multiplied by the square root of the fineness and the product located on the horizontal scale of the curve. This value is projected upward until the curve is reached. The twist multiplier on the vertical scale opposite this point should produce maximum yarn strength for any desired number.

A formula for predicting the cotton yarn strength from the observed strength of a single count made with the same cotton was also developed at the laboratory. Mr. Landstreet explained that the skein strength of any count may be predicted by measuring the fineness of the cotton fibers concerned and then spinning one count, preferably coarse, under optimum conditions. The skein strength of the count and the fineness can then be substituted into the formula:

$$S_2 = \left\{ S_1 + \frac{500}{\sqrt{A}} \right\} \frac{C_1}{C_2} - \frac{500}{\sqrt{A}},$$

to predict the strength of any other count. In the formula S_1 is the strength of the spun yarn; S_2 is the predicted strength of the desired yarn; A is the Arealometer reading in mm^2/mm^3; and C_1 and C_2 are the spun and desired counts respectively.

Further research at the laboratory showed the effect of fiber irregularity on spinning performance. This work showed that there would be no advantage to a farmer or ginner in deliberately mixing long fiber and short fiber cottons in the hope of obtaining a higher market price for the mixture. The mixture would actually have less market value than if sold separately. The data show that mixtures of lint from varieties having widely different fiber properties have adequate uniformity in so far as spinning performance and yarn strength are concerned. Fiber irregularities such as blending of unlike varieties had no important effect on spinning performance.

Further work on irregularities in fiber properties of cotton in mill mixes showed that more concern was needed for mean fiber values rather than for fiber irregularities. Variability in the unmixed raw stock ranged from nine to 20 per cent in U.H.M., from 16 to 35 per cent in fineness, and from 19 to 24 per cent in fiber strength. In contrast, samples from finisher drawing sliver had maximum range of only five, five and six per cent for U.H.M., fineness, and strength, respectively. This work was aimed at opening the way for plant breeders, who had been handicapped by the idea that plant and fiber must not be irregular, in developing improved varieties of cotton.

C. B. Landstreet checks one of the over 1,000 samples of cotton in the laboratory's cotton library. All fiber properties have been measured and spinning tests run on the samples and the results are printed on cards which stay with the miniature bales. The library makes available for research many combinations of various fiber properties.

Roving Strength Tester

The use of a laboratory designed roving strength tester was employed in another study into the relation of twist to the construction and strength of cotton rovings and yarns. Mr. Landstreet pointed out the obvious fact that the strength of roving and yarn, other things being equal, is a function of twist, and under-twisted roving breaks in the creel and stretches. Over-twisted roving, on the other hand, does not draft properly and is time consuming in its production. The study, which was made by Mr. Landstreet, Mr. Ewald and Jack Simpson, points out that a problem which arises in the production of a yarn with a given size and twist requires a knowledge of the relation between five factors: (1) original yarn number; (2) final yarn number; (3) yarn contraction; (4) yarn twist; and (5) machine twist. An equation was developed in the course of the work which combines the factors.

In roving the twist-strength curve shows that strength increases slowly at first but when sufficient twist is reached the rate of change is so rapid that the curve is nearly vertical. The average twist used in commercial rovings is usually in the critical twist zone. At one point in this zone an increase of about 0.2 of a turn of twist quadruples the roving strength.

In yarns, the study showed that the old square root relation for calculating twist is not accurate over wide ranges in yarn numbers as has been known for some time. Provided yarn density is constant, the square root relation yields constant peripheral twist angle in all yarn numbers. The variation in yarn density along with scale effect may be the explanation as to why the relation does not hold. Nomographs have been prepared for aid in solving the equations dealing with the twist-strength relationship.

Leward Cotton Mills

Worthville, N, C.

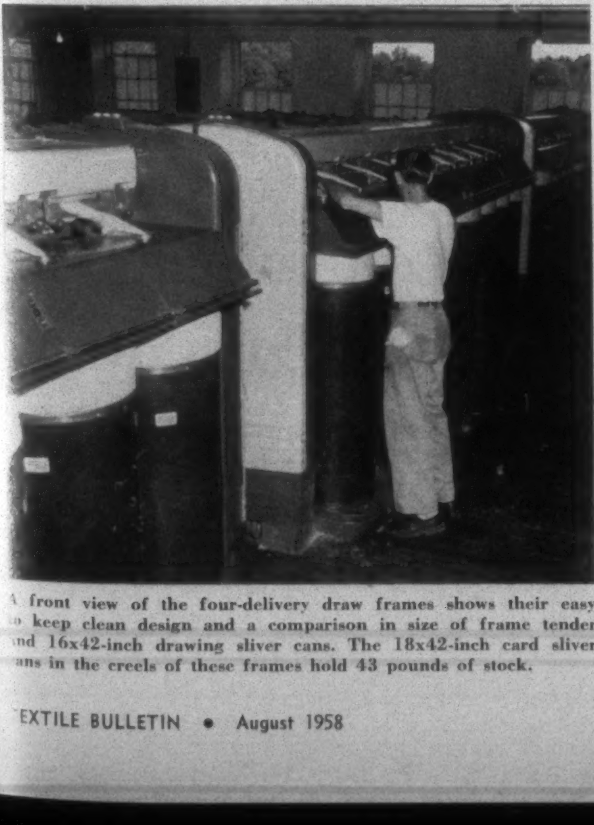
Money Spent Will Be Money Earned

LEWARD Cotton Mills Inc., Worthville, N. C., has recently completed a modernization program in its carding and spinning departments which included the installation of new Whitin warp spinning and drawing and reconditioning of its Whitin roving frames. The program was designed to improve quality, increase production through higher spinning speeds to get better balance between spinning and weaving, and reduce the mill's manufacturing cost. The cost of the program was over $360,000.

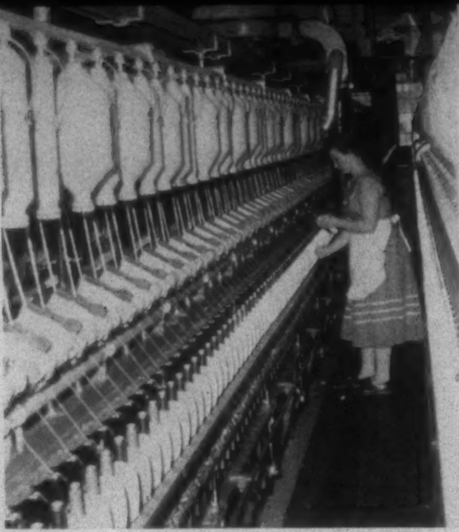
A combination of good selling, good supervision and good help has enabled Leward to compile an impressive record of continuous operation without curtailment for a number of years. An excellent attitude of co-operation exists throughout the mill and this is reported by the mill's management to be a major factor in its uninterrupted operating schedule. The products of the mill are sold in many areas all over the U. S. These products include drills, twills, poplins, sail cloths, sateens and sports wear fabrics.

The cards are equipped with 18x42 inch cans and doff three times per shift. The cans hold 43 pounds of stock. The card cans were changed from a conventional size some time ago and formerly held 11 pounds of stock. These small cans had to be doffed nine times per shift.

The big card cans are creeled eight ends up in the new single-process Model M Evendraft Whitin drawing frames. The drawing runs slightly over 300 feet per minute and is equipped with 16x42 inch cans which hold 30 pounds of stock. Leward got about 11.5 pounds in the cans on its old drawing. The Model M drawing has four delivery heads per frame. The mill has 20 deliveries of drawing running 54-grain sliver.



A front view of the four-delivery draw frames shows their easy to keep clean design and a comparison in size of frame tender and 16x42-inch drawing sliver cans. The 18x42-inch card sliver cans in the creels of these frames hold 43 pounds of stock.



The mill spins its 14s and 16s warp yarns on new Whitin spinning frames with Unitrol drafting elements. The frames are four-inch gauge and have 2½-inch rings, umbrella creels, Pneumafil and Parks-Cramer overhead cleaners. The entire spinning room is air conditioned with Bahnson's dry duct evaporative cooling system.

Roving Frames

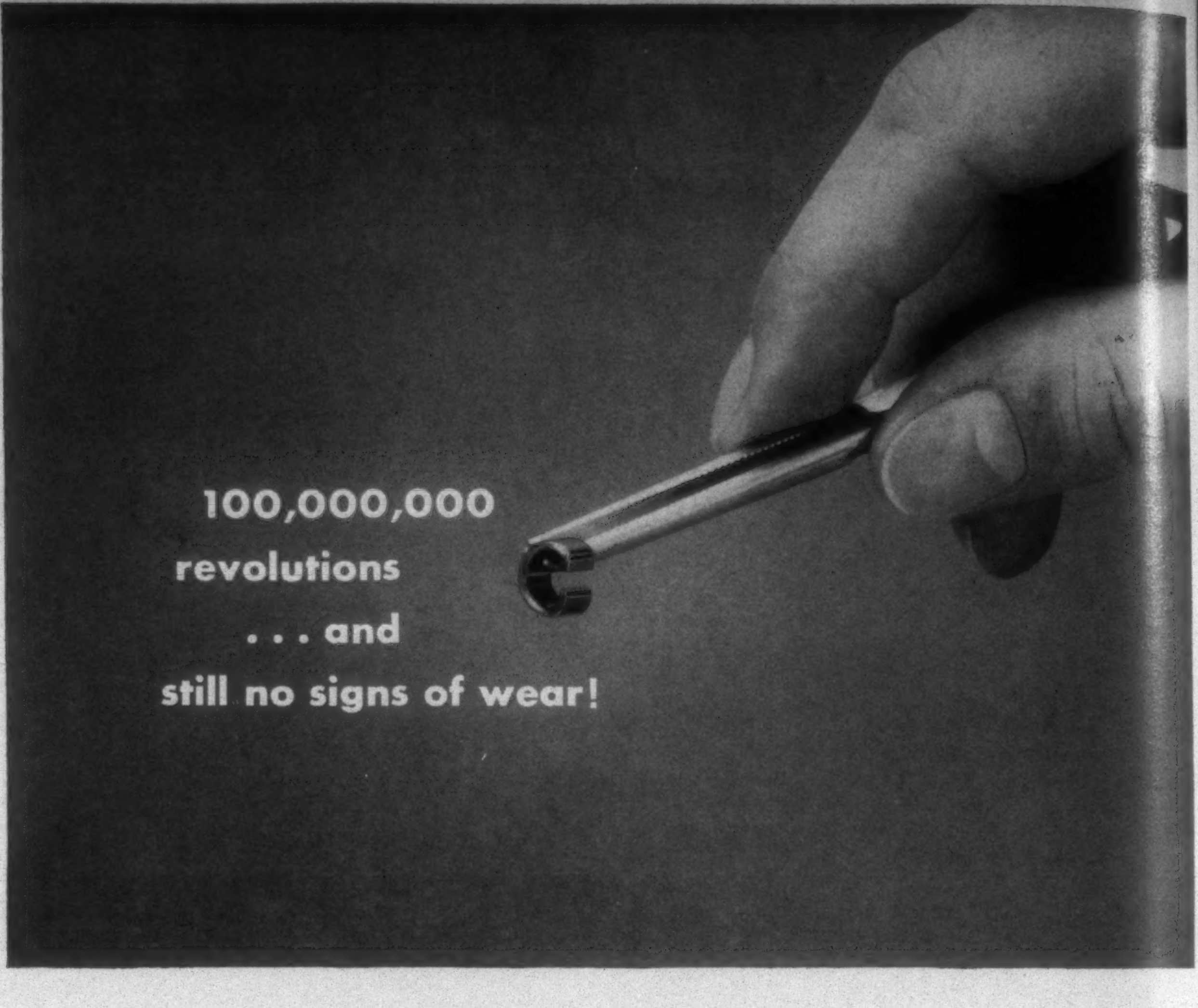
The roving frames have been reconditioned and fitted with Pneumastop. Included in the Pneumastop installation is an attachment to stop the frame when a breakback occurs in the creel. The drafting element on the frame is three-roll conventional. Roving produced is 0.65 hank. The frames make a 12x6½-inch package which holds 50 ounces of roving. They formerly made an 11x5½-inch package holding 30 ounces.

The mill's 14s and 16s warp is spun on new Whitin spinning frames with Unitrol drafting elements. The frames have a four-inch gauge and 2½-inch rings. The entire spinning area is covered by Parks-Cramer overhead cleaners and Bahnson dry duct evaporative cooling system. The cooling system not only aids in running high spinning speeds but also adds to employee comfort. The new frames have the Pneumafil ends down collection system.

The spindle speed on the new frames is 9,100 r.p.m. The front roll speed on the 14s warp is 178 r.p.m. and the twist multiple is 4.30. The frames run a 10½-inch paper bobbin. While they are set up for 12-inch bobbins the mill decided not to go on them since this would necessitate a change in the spooler. The warp bobbin holds 7.3 ounces of yarn and uses the combination winds. The mill uses one-inch staple cotton and produces about 96,000 pounds per week.

Opening And Picking

A modernization of the opening and picking equipment completed last year included the addition of Whitin Axi-Flo, Axi-Feed blenders, downstroke cleaner and auxiliary equipment. The two three-beater pickers have been changed to two-beater pickers. Also, a two-beater picker was added. The pickers operate at 265 pounds per hour. This change was made to improve the cleaning efficiency of the operation. Cotton is laid down in a 30 bale blend.



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Opening, Picking, Carding & Spinning

What's New In

Traversing Balloon Control Rings?

This is a report of our investigations into new advancements which have been made in increasing package sizes on older model spinning frames. The report contains information directly from the manufacturer of certain devices used in accomplishing this as well as results obtained from two mills which use the product.

ADVANCEMENTS in methods and technology which have recently been made have allowed the use of larger diameter rings and a longer stroke on small package spinning frames. A requirement for a frame with a long stroke (increased distance between thread guide and traveler) is a method of control of balloning. This is best accomplished by use of traversing balloon control rings.

The idea of the control of ballooning with rings originated in Europe over 50 years ago. The reason that the system did not prove effective at that time was that the rings were mounted in a fixed position. While ballooning was controlled well when the ring rail was in certain places it did not do its job when the rail was in other places. Filling of the need for traversing balloon control rings was a long time in coming.

Textile Machinery Exchange Inc., Charlotte, N. C., has developed such a system for changeover of small package frames. The general advantages are: (1) larger packages; (2) better quality yarn; (3) higher speeds; (4) fewer ends down; (5) lighter or heavier traveler (whichever is desired); and (6) less ring and traveler wear. Since the yarn does not hit the separators on spinning frames equipped with this balloon control, ring and traveler wear at the point where the yarn slips off the separator blades is eliminated. This is proved by the fact that it is not necessary to turn new rings when breaking in to prevent wear from traveler vibration as the yarn whips against the separator. In many cases the blade is not necessary.

The balloon control ring's traversing motion is completely adjustable. It operates to keep the control ring half way between the thread guide and the traveler. It is powered from the head-end cross shaft through a longitudinal shaft. Steel pulleys with lifting chains attached are mounted on the shaft. The arrangement makes possible any stroke up to 11 inches. When the frame is doffed the control rings are either dropped or raised and thrown back out of the way. Though made from one piece of steel, the rings are self-threading.

Larger Packages

Spinning package sizes may be increased by increasing either or both the ring diameter and the stroke. By increasing the length of the bobbin on $3\frac{1}{2}$-inch and wider gauge frames, 12-inch bobbins with an 11-inch stroke can be run. The ring size can be increased to the maximum allowable by the gauge. The traversing balloon control ring takes the place of separator blades.

The yarn's quality is improved because it floats around the inner surface of the control ring instead of whipping against separator blades. This whipping action not only fuzzes up the yarn but it also causes non-uniformity of tension. When a rather large control ring is used the traveler size is usually decreased about three numbers. A soft package which is particularly desirable when the yarn is to be dyed is made with this method. If a hard package is desired, the control ring is made with a diameter only slightly larger than the yarn package. The traveler size may then be increased and a harder package will be the result.

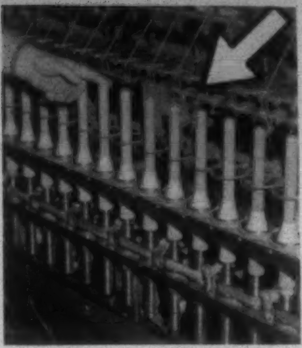
Since the control ring provides a holding place for the yarn between the thread guide and traveler there is less weighting or pull on the traveler. For this reason travelers may be run at higher speeds than before. This is accomplished without increasing the amount of wear on the traveler. Better tension control and lighter travelers combine to reduce the number of ends which come down.

Rhodes-Whitener Mills

Taylorsville, N. C.

TO get the story on the traversing balloon control under operating conditions, TEXTILE BULLETIN visited the Rhodes-Whitener Mills Inc., Taylorsville, N. C. This mill is equipped with Saco-Lowell spinning with the Roth drafting system. The frames are three-inch gauge and have $2\frac{1}{4}$-inch rings. The spindle speed is 7,800 on 6s to 12s combed and carded stock.

Before making the changeover to a longer stroke and the addition of the balloon control rings, the mill's package weight was $2\frac{1}{2}$ ounces on soft twist and $2\frac{3}{4}$ to three ounces on regular hosiery twists and was made on $1\frac{7}{8}$-inch rings. The stroke was seven inches. The stroke was lengthened to $9\frac{1}{2}$ inches by raising the roller beam and the head and foot ends of the frame. Longer lifting rods were also installed. The changeover was supplied by Textile Machin-



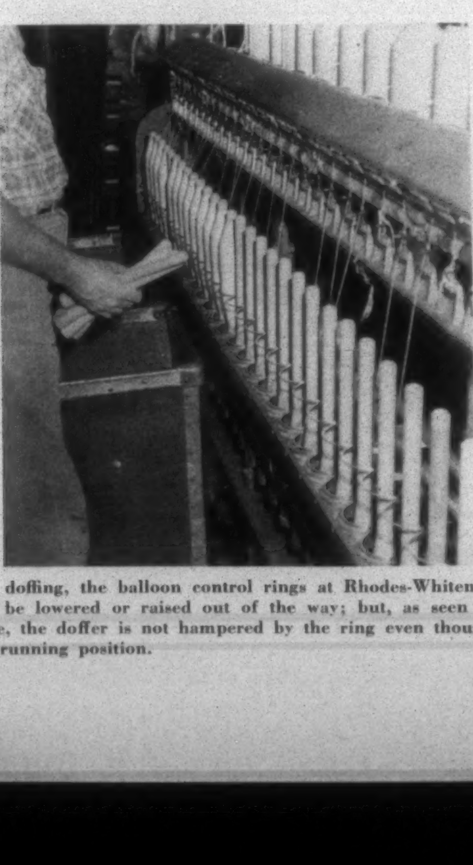
In order to increase the stroke from seven to 9½ inches at Rhodes-Whitener Mills, the roller beam was raised by means of blocks as shown in this photograph. It was also necessary to raise the head and foot ends of the frame.

ery Exchange Inc. After the changeover was completed the package weight was increased to six ounces on soft twist and over eight ounces on regular hosiery twists. The mill lightened its travelers from one to two numbers.

Doff Time

Balloon control rings are necessary when running a long stroke on frames with this gauge and ring size. The changeover cost was reported to be considerably less than $1,000 per frame. Before making the changeover the mill was doffing its 12s soft twist combed yarn every hour and 45 minutes. A doff on the same count runs approximately four hours now. The mill previously used 8½-inch bobbins but since completion of the changeover uses one 11 inches long.

In the matter of labor savings, the mill feels that it is benefited both from the spinner's and doffer's standpoint. A big part of the spinner's job had previously been to get straightened out after the doffer had completed doffing a frame. Also, since the time it takes the frame to run the bobbin full of yarn has been more than doubled, there is considerably less doffing needed. The mill reports that it had used 15 spinners and doffers on 11 frames for three shifts before changing over. Nine spinners and doffers are now used to run the same 11 frames for three shifts. The labor saving amounts to 40 per cent. The larger package also allows a considerable saving in the cost to wind.



When doffing, the balloon control rings at Rhodes-Whitener may either be lowered or raised out of the way; but, as seen in this picture, the doffer is not hampered by the ring even though it is in its running position.

Choate Mfg. Co.

Charlotte, N. C.

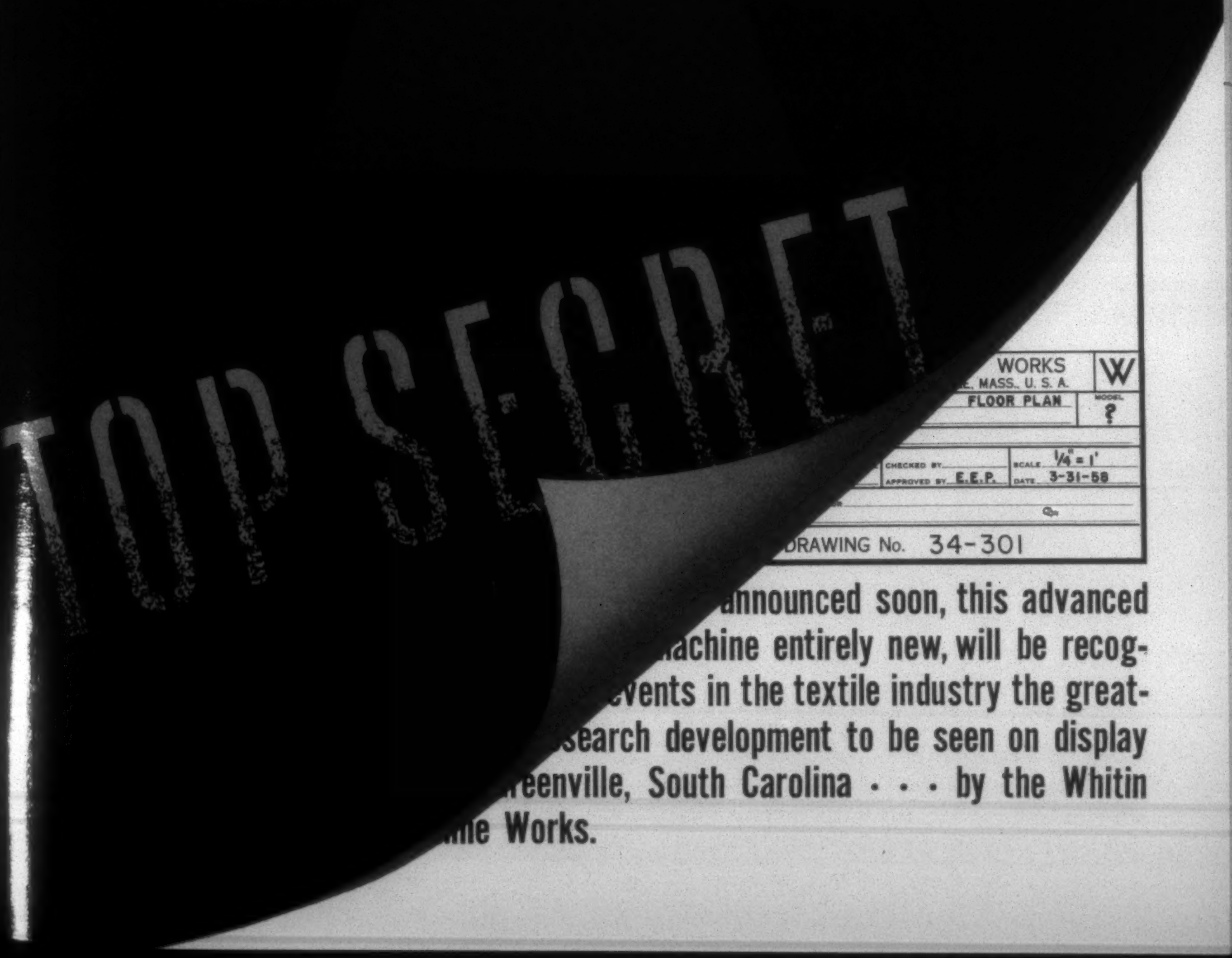
TO develop further facts on the usefulness of the traversing balloon control ring, TEXTILE BULLETIN visited the plant of Choate Mfg. Co., Charlotte. This company made 5½-inch gauge frames out of 2¾-inch gauge frames and installed the balloon control ring. This was done by using every other hole in the base rail for placing their bolster type spindles. A new steel ring rail was installed on the frames. The rings are four inches in diameter. New three-roll drafting elements were installed on the frames along with umbrella creels. The drafting unit was made by F. A. Young Machine Co., Gastonia, N. C.

At Choate Mfg. Co. the control rings are attached on four-inch ring frames operating with an 11-stroke with a spindle speed of 3,500 r.p.m.

Stroke Increased

The stroke on the rebuilt frames was increased from eight inches to 11 inches. Since counts from 1.18s to s were to be run it was decided to put the balloon control ring and separator blades on the frames. However, the mill found that by removing the separator blade and using the balloon control ring alone, ends down and fly were reduced.

The mill runs its 1.18s and 2½s to 3s with a spindle speed of 3,500 r.p.m. This yarn has 5.5 turns of twist per inch. On 2s yarn with nine turns of twist the mill runs a



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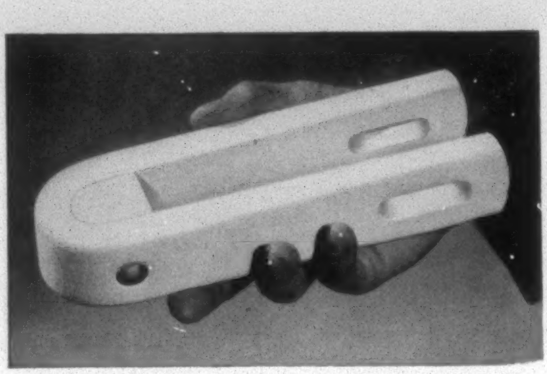
HARRIS HEAVY DUTY LUG STRAPS AND HOLD UPS



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W. P. Gantt, Choate Mfg. Co.'s superintendent, nearest the camera, and Floyd Westmoreland, Textile Machinery Exchange, are shown looking over one of the modernized frames.

spindle speed of 4,000 r.p.m. The frame puts 20 ounces of 1.18s yarn and 29 ounces of 2s yarn on the package. The running time between doffers is approximately doubled.

Can Spin

A sliver-to-yarn spinning frame is used at Choate running viscose rayon made into 50-grain sliver and delivering 3s yarn. The mill makes this stock in a range of numbers from 1.25s to 30s. The frame has a five-inch gauge and is equipped with the Roth drafting system. The stroke was lengthened from nine inches to 11 inches. This increase in stroke alone has resulted in a package which is about one-third greater in weight. On 1.25s yarn the package did weigh 11 ounces before changing over and now weighs 17 ounces. On 3s yarn the package weight is 26 ounces. Separator blades are not necessary.

Wash-And-Wear Heads Conference Topics

Cotton wash-and-wear will again be the subject of a majority of the research papers to be presented at the seventh annual Chemical Finishing Conference, according to the National Cotton Council. In recent years, the conference programs have reflected the growing interest and increased volume of research being done by industry in this field.

According to Dr. Leonard Smith, council utilization research director, "The textile finishes and textile chemical industries are now expending more research effort on wash-and-wear than on all other phases of research combined."

The 1958 conference will be held at the Statler Hotel in Washington, D. C., on October 1 and 2. Last year's conference was attended by more than 280 scientists representing cotton mills, chemical manufacturers, finishers, educational institutions and research laboratories. A similar attendance is expected this year.

Warp Preparation & Weaving

A New Series

Fundamentals Of Leno Designing

PART TWO

By E. B. BERRY
School of Textiles
North Carolina State College
Raleigh, N. C.

This series on leno weaving and designing was started last month with a description of the fundamental equipment used and an explanation of its operation. Among other items covered in the first installment were the regular and super doup needles, slackener motion, jumper motion, and the simplest of all leno weaves the one-cross-one. The second installment describes more elaborate leno weaves such as tubular fabrics, one-cross-one variations, figured leno, and four-end leno.

THE doups discussed so far were bottom doups which require a jumper motion and a slackener motion. The settings on both these motions are delicate and can cause trouble if they are not adjusted correctly. It is possible to weave marquisette with a top and bottom doup, in combination, which will eliminate both the jumper and slackener motion. Fig. 12 illustrates how this is done.

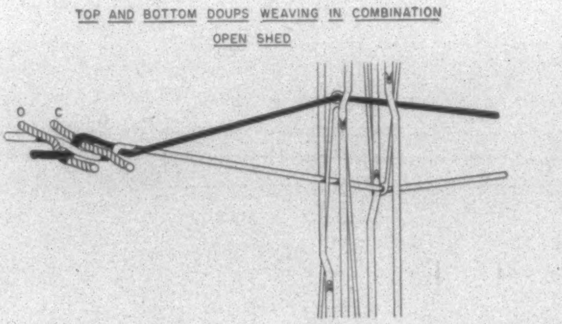


Fig. 12—Top and bottom doups weaving in combination with open shed.

The doup end goes through the bottom doup needle as before. The ground end is controlled by the top or inverted doup needle. This needle is the same as the bottom doup, except it is turned in the opposite direction. The second standard is up in the bottom doup to make an open shed. This is a right-hand doup. The second standard is up also in the top doup to allow a space for the doup end to ride. The doup end must be in a straight line from the doup needle of the bottom doup to the drop wires. Unless the second standard of the top doup is raised, the doup end would be deflected out of the straight line and the extra tension would break the end.

Fig. 13 shows the crossed shed with the top and bottom doups. The first standard of the bottom doup is raised which makes the crossed shed for the doup end. The first standard of the top doup is also raised to allow the doup end to be in a straight line from the doup needle of the bottom doup to the drop wire.

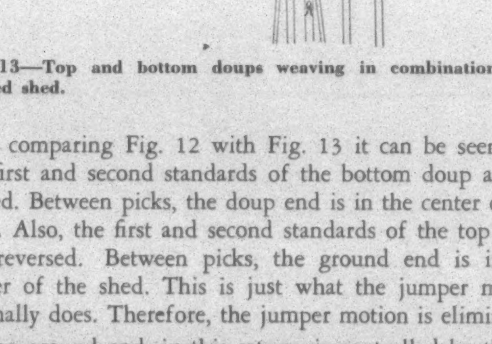
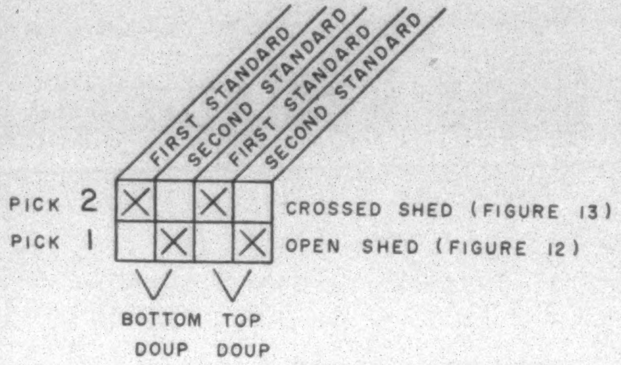


Fig. 13—Top and bottom doups weaving in combination with crossed shed.

In comparing Fig. 12 with Fig. 13 it can be seen that the first and second standards of the bottom doup are reversed. Between picks, the doup end is in the center of the shed. Also, the first and second standards of the top doup are reversed. Between picks, the ground end is in the center of the shed. This is just what the jumper motion normally does. Therefore, the jumper motion is eliminated.

The ground end, in this set-up, is controlled by the inverted doup needle and will do the same amount of bending as the doup end, while the shed is being made. This means that for the open or crossed shed, both doup ends and ground ends do the same amount of bending. This eliminates the slackener motion. The chain plan for this set-up is shown in Fig. 14.

With top or inverted doups the yoke with its spring is required to raise the doup needle. This spring is over the top of the harness and is attached to the loom arch or a bracket.



	FIRST STANDARD	SECOND STANDARD	FIRST STANDARD	SECOND STANDARD	
PICK 2	X		X		CROSSED SHED (FIGURE 13)
PICK 1		X		X	OPEN SHED (FIGURE 12)

Fig. 14—The chain plan for eliminating the slackener motion by using open and crossed sheds on successive picks. For open or crossed sheds, both doup ends and ground ends do the same amount of bending.

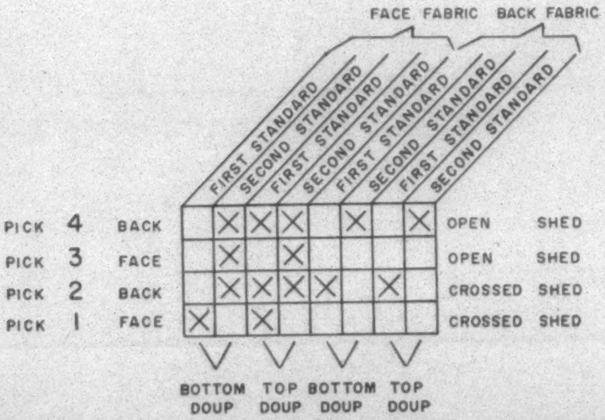
Tubular Fabrics

Grapefruit bags, orange bags and laundry bags are sometimes woven in tube form on the loom. This eliminates much sewing when making the bag. Such fabrics generally have so few ends and picks per inch that there is not much danger of crowding ends on the loom beam or chafing ends because of the slow take-up.

To make such a fabric four sets of doups are required. One bottom and one top for the top layer and one bottom and one top for the bottom layer. As in any tube fabric the filling sequence must be one face, one back. Fig. 15 shows the chain plan to make such a fabric.

One-Cross-One Variations

If one beam is used, the doup end and ground end must do equal bending as they both must have the same warp contraction. This was shown in Fig. 11. If two beams are used, the ground is the tight end and is shown in Fig. 16. Generally, only one beam is used.



		FIRST STANDARD	SECOND STANDARD	FIRST STANDARD	SECOND STANDARD	FIRST STANDARD	SECOND STANDARD	FIRST STANDARD	SECOND STANDARD	
PICK 4	BACK		X	X	X		X		X	OPEN SHED
PICK 3	FACE		X		X					OPEN SHED
PICK 2	BACK		X	X	X	X		X		CROSSED SHED
PICK 1	FACE	X		X						CROSSED SHED

Fig. 15—This figure shows the chain plan for making tubular fabrics such as grapefruit, orange or laundry bags.

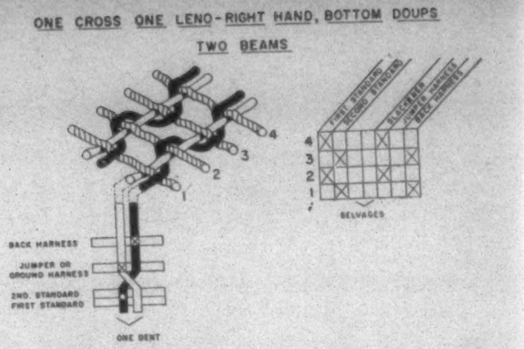


Fig. 16—This is a one-cross-one leno using right hand botto doups and two beams.

It may be desirable, in order to obtain a special effe in a fabric, to have two or more picks in one shed. This i possible as shown in Fig. 17. The variations are unlimited A fabric may have an open shed, crossed shed, then open shed for two or three or four picks, then go to crossed shed, open shed, then crossed for two or three or four picks. Almost any sequence is possible. Care must be exercised in not getting too many picks in one shed. Generally, leno weave fabrics have few picks per inch and the fabric will be very flimsy if more than four picks per shed are inserted.

As in regular weaves, when there are two or more picks in one shed, there must be some means of binding off the filling at the selvage. Otherwise the shuttle on its second trip across will pull out the first pick thrown. In the weave shown in Fig. 17, some selvage must be used that will bind off the picks. This could be a plain weave or tape. In either case, the contraction of the body ends may be different from that of the selvage ends and selvage spools may have to be used. This is one disadvantage of this type of weave.

It is possible to combine more than one beam and more than one pick per shed in a fabric. That is, one or two beams may be used, with two or more picks in one shed.

Combine Right And Left Doups

To obtain a different effect in the cloth, it is possible to have right-hand doups and left-hand doups weaving side by side. This is shown in Fig. 18. Here, too, there are many possibilities. There may be three sets of rights and three sets of lefts or three right and one left or one right and three left.

One advantage in such a weave is the ease of getting

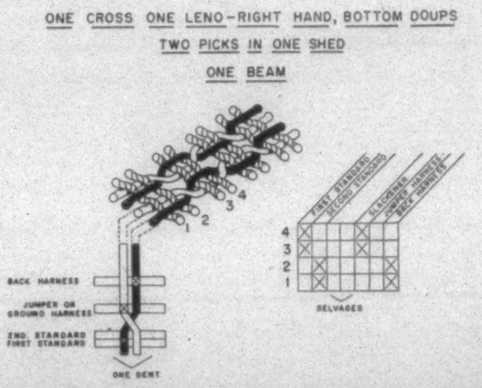


Fig. 17—One-cross-one leno with right hand bottom doups, two picks in one shed and one beam.

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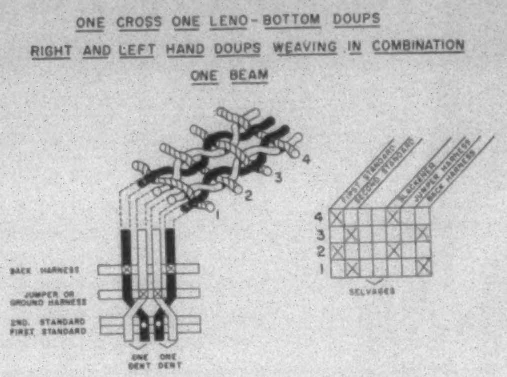


Fig. 18—This figure shows right and left hand bottom doups weaving in combination on a one-cross-one leno with one beam.

the effect. One set of doups is all that is needed (if the sley does not require two) and the chain plan is no different than if the doups were all right or all left. The only variation is the way the ends are drawn.

It is possible to use one or two beams, two or more picks in one shed and right and left-hand doups weaving together. It can be seen that the leno weaves are a family with variations.

Douping And Plain Weave

In order to obtain a firmer fabric in certain areas and to produce novel effects the weave may be changed from leno to plain. This is shown in Fig. 19. Picks one and three are open and pick two is the crossed shed. Pick four is the plain shed with the doup end down.

The open and crossed sheds follow the same loom setup as before. In a plain shed the doup end is down and since either standard will raise the doup end, both standards must remain down. This is the only time the ground end is raised for the shed. Note on pick four, the doup end is down and the ground end is up. In the chain plan, the jumper (ground) harness is raised. This brings the ground end up. The jumper motion works too but since the ground harness is pegged on pick four it will raise for the throwing of the pick and not just between picks.

It is possible here to go from crossed to open for a specified number of picks, then to plain and open for a specified number of picks. There is a catch though in that the number of picks in each group must be correct to give the results desired.

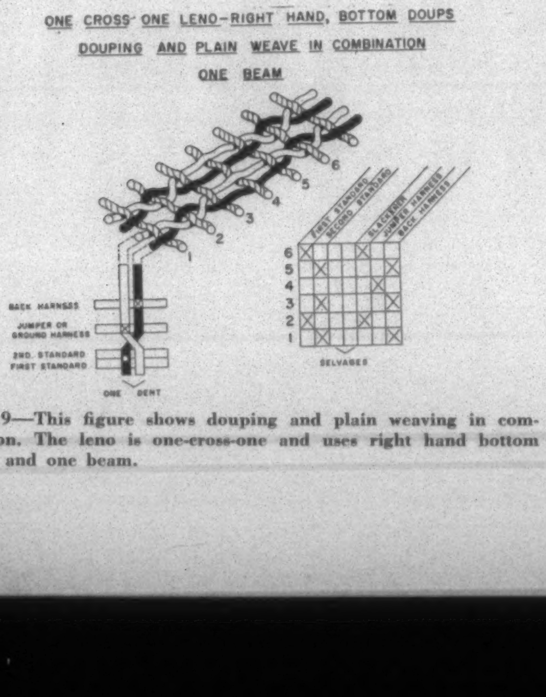


Fig. 19—This figure shows douping and plain weaving in combination. The leno is one-cross-one and uses right hand bottom doups and one beam.

Suppose it was calculated that the sequence of crossed, plain, open, plain, open, crossed would work out correctly with the picks per inch and the size of the plain weave area. The effect desired would be as shown in Fig. 20. However, upon close inspection it will be seen that the weave will not produce this effect. Instead it will appear in the cloth as Fig. 21. In going into or out of the plain shed, the same shed must be made as before. This is the only way the proper binding can be made.

It is possible to combine multiple beams, multiple picks per shed, right and left-hand doups, and douping and plain weaving. Fig. 22 shows the weave for a right and left-hand doup weaving in combination. Two beams are needed the doup end does most of the bending and will have warp contraction of 12 to 20 per cent. The ground end the tight end and may have only three to five per cent warp contraction.

Figured Leno

The one-cross-one is the plain weave of leno. Variation can be more complicated as well as interesting. Fig. 23 illustrates a three-end leno (one-cross-two). The two ground ends pass through the straddle between the two standards but each of the two ground ends are drawn on separate harness. This gives individual control to each end and they interlace in plain view.

In this weave, the three crossing ends must be reeded in the same dent. The drawing-in draft is straight, left to right, for ease of drawing as well as putting up ends when they break at the loom or when a smash occurs.

In this particular weave, where the ground ends weave

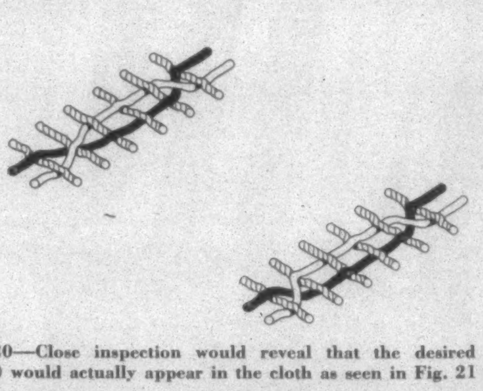


Fig. 20—Close inspection would reveal that the desired effect *(right)* would actually appear in the cloth as seen in Fig. 21 *(left)*.

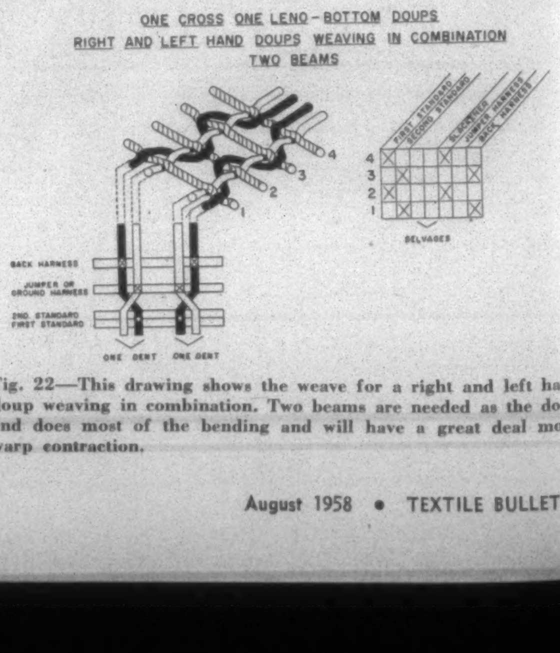


Fig. 22—This drawing shows the weave for a right and left hand doup weaving in combination. Two beams are needed as the doup end does most of the bending and will have a great deal more warp contraction.

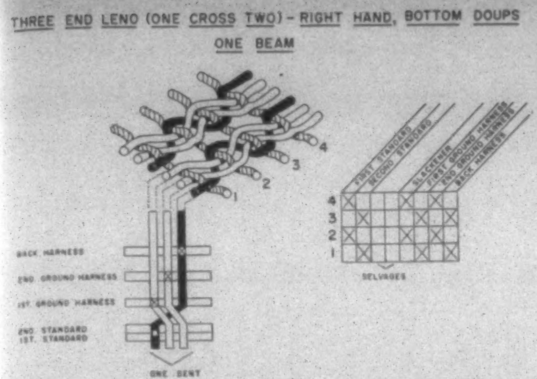


Fig. 23—A three-end leno (one-cross-two) using right hand bottom doups and one beam. The two ground ends pass through the straddle between the two standards. Each of the two ground ends are given individual control since they are drawn through separate harness.

plain throughout the entire repeat, a jumper motion is not necessary. Each ground end will change from up to down, or down to up, on alternate picks. Thus the ground harness are level between picks due to the weave and this eliminates the need for the jumper motion.

Another condition where the jumper is not necessary is to have the doup end down for one or more picks before crossing takes place. This makes possible the doup end getting under the ground end without raising the ground end. Right and left-hand doups, one or two beams, two or more picks in a shed, may be incorporated with this three-end leno.

A more interesting variation of the three-end leno is shown in Fig. 24. In this weave, the doup end interlaces as plain weave on both the left and the right side. That means a plain shed is formed while the right-hand doup end is on the right side and the left side. A doup end is said to be "in character" when it is on the open shed side (not crossed). Thus a right-hand doup on the right side is in character.

In this weave pick two is the plain shed and the doup end is in character. Pick five is also a plain shed but the doup end is out of character. This is possible as the doup end was up on the crossed shed on pick four and it will stay on the left-hand side due to its interlacing with pick four. The slackener is never operated on the plain shed when the doup end is out of character.

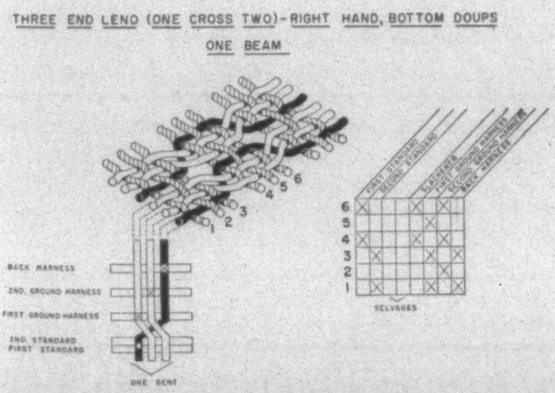


Fig. 24—A variation of the three-end leno is formed when the doup end interlaces as plain weave on both the left and the right side. This means a plain shed is formed while the right hand doup end is either on the right side or the left side.

Four-End Leno

Following logical thinking the next weave in sequence would be the four-end leno or one-cross-three, with the doup and ground ends weaving plain. This is not practical. The weave is shown in Fig. 25. Upon close inspection it will be seen that there will not be enough bindings and the cloth will look like Fig. 26.

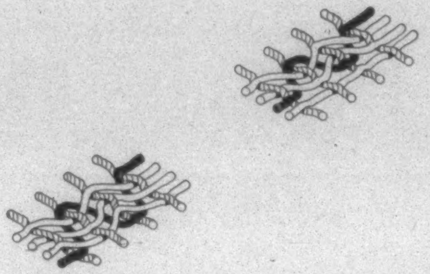


Fig. 25—A four-end leno *(left)* is not practical to weave since there would not be enough bindings and the cloth would look like that shown in Fig. 26 *(right)*.

The next weave would be the five-end leno, or one-cross-four, with the doup and ground ends weaving plain. This is a lot of distance to cross, but is used sometimes. The weave does not work out well with the bindings.

Doup Needle Limitations

The doup needle, Fig. 2a, is good for plain fabrics such as marquisette but when a fancy design is desired it may be necessary to go to two sets of doups. Fig. 27 shows a fancy weave woven with doup needles as in Fig. 2a. It can be seen that a separate set of doups are needed for each change of pattern. If the pattern becomes very fancy it will use up all the harness capacity in the dobby head.

This weave, Fig. 27, requires two sets of doups. In addition, each set of doups must have its own ground harness, back harness and slackener motion. Each set of crossing ends must be reeded in the same dent. The drawing-in draft is straight. The need for two slackeners will be seen. Each set of doups will not require slackening on the same pick.

(To Be Concluded Next Month)

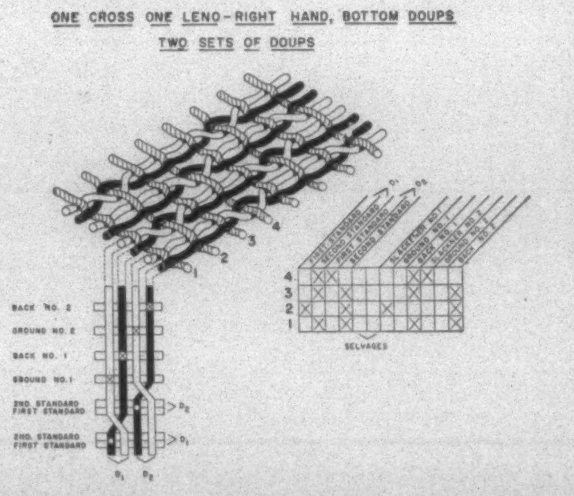


Fig. 27—This is a fancy weave woven with two sets of doups with each set having its own ground harness, back harness and slackener motion. Each set of crossing ends must be reeded in the same dent. The drawing-in draft is straight.

Things Not To Do

Dyehouse Don'ts By Dodson

By WILLIAM C. DODSON, Consulting Editor

PART TWO

This continuation of an article started last month points out a number of items which should definitely not be done in the operation of a dyehouse. The principles of dyehouse trouble diagnosing contained in this article are the result of years of experience by Mr. Dodson and run the gamut from tiny holes in the roof which admit shafts of sunlight causing splotching on diazotized warps to the weird effect found in bleaching or dyeing caused by rat urine on the stored greige goods.

LAST month we started this discussion about things not to do in running a dyehouse. The first point covered was don't assume that your water supply is entirely suitable for your dyehouse. Water which may be clean, clear and good for drinking may be poison to good dyeing results. Don't assume, either, that your steam supply is suitable. Fortunately, steam is seldom the villian in the cast of dyehouse problem characters. However, when it is bad for dyeing it is very, very bad.

Our third point was don't assume that your thermometers and pressure gages are accurate. Even the most expensive gages can fool you badly if they are improperly installed or if they are damaged. They are wonderful tools to work with and they deserve proper care and periodic checking by a qualified person. Our final point last month was don't assume that your pump delivery or your rotary machine r.p.m.'s are as they should be. If the dryer is observant, he will quickly notice any peculiarities in the pressure gage readings of pump-type machines. There are two main causes of abnormal pressure readings and both are the result of lint accummulation on screens and impellors. Causes and remedies were discussed last month.

Air Contamination

Item 5. It has been my observation over the years that too few dyehouse operators give sufficient consideration to the losses that can occur due to faulty ventilation; and by ventilation I mean both the removal of vapors and gases *from* the dyehouse, as well as care in locating the inlets of fresh air *to* the dyehouse. Just let me bring back from memory two outstanding cases of (a) faulty removal of air; and (b) faulty input of air. I can assure you that both are factual.

In (a), the dyehouse of an internationally known mercerizer was located in an extension of the room housing two extra large warp-yarn dryers. Both these dryers had the usual vent stacks through the roof, so theoretically the vapors from the drying yarn were properly taken care of.

In later years that plant replaced its original skein dyeing machinery with package dyeing machinery, and the management went in for the most modern dyeing and drying machinery available. I know, because I sold it. No expense was spared to have everything ship-shape and efficient.

When the package dyeing and drying machines were bought, I carefully went over the proposed locations. It was in the Summer, and all roof ventilators were open, with big exhaust fans pushing air to the outside. When the new equipment was installed it was late Fall, and most of the top ventilators were closed. Only two or three exhaust fans were in use, and over the big warp-yarn dryers I noticed a faint grey haze way up near the roof, but paid no particular attention to it.

The intake to the package dryer was in the same big room, and positioned about 15 feet above the floor. (We wanted to use the warm outside air in order to prevent bringing in cold Winter air later on and thus using up steam unnecessarily.) Well, with the first lot of bleached yarn we had contamination in the dryer. Dingy and yellowish, it was certainly not the top quality for which the mill is famous.

At first we *assumed* that the yellowing was caused by oi film in the new drying machinery, but the second lot wa no better than the first, and suddenly that grey ceiling ha took on its true meaning.

The haze was simply a condensation of finely volatiliz oils and softening compounds distilled from the dryin warps mentioned earlier. For some reason these vapors we not being fully vented to the outside by the warp-yar dryers' regular vent stacks.

This microscopic stuff was being sucked into the packa dryer at over 4,000 cubic feet per minute, and forc through the packages by about seven pounds per squa inch of blower pressure. All this occurred in spite of th fact that an electronic-type air filter had been installed the intake of the new package dryer; the particles wer too small and too numerous. Simple when you see it.

The remedy was to move the electronic filter to anoth part of the mill, and to pipe from it to the intake of the new dryer. That was simple, too, but my company had to pay for it.

An Ill Wind

We come now to (b), or the sometime bad results of impure input air in the dyehouse. In this case the victim was a very new and large full-fashioned hosiery mill located in Philadelphia (there used to be such things there). It was seven stories tall, with the dyehouse located on the top floor where good light and ventilation were free and plentiful. In those days, full-fashioned manufacturers made a profit and built accordingly. Unfortunately, there came a Spring season when red specks began appearing on all exposed goods in the dyehouse. No bleaching agent suitable for silk hosiery would touch these specks, and they were so very small that they would not boil off or brush off.

The dyer was an experienced and highly capable man, so he *assumed* that someone in his drug room was careless in handling dry color. Also, the mill had had some labor trouble, so sabotage was given consideration. The dyestuff manufacturers were able to prove in some manner that the specks were a pigment unlike the silk dyes used by the mill, so things looked pretty bleak.

I won't go into a lot of personal detail except to say that wet dye nets were hung on the inboard side of all intake fans, and they soon accumulated a mass of these red specks. Further investigation developed the fact that across a narrow alley from the hosiery mill was a modern loft building, and on *its* seventh floor was a shoe manufacturer. That season he must have had a run on women's red shoes, and I suppose that somewhere in the manufacturing process the leather had to be sanded or brushed. It was only natural to vent the waste to the alley area, so the hosiery mill's intake fans took all they could grab of this stuff, and sent it all over the dyehouse.

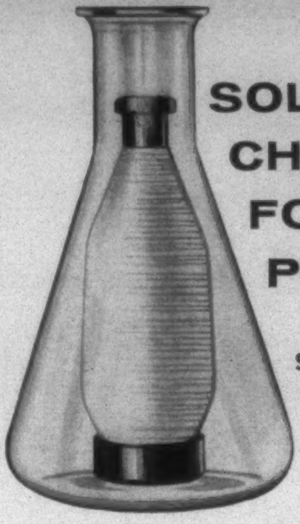
I remember it all so well because it was during Prohibition, and the Boss Dyer who took me to the Pennsylvania station handed me two one-gallon jugs of Apple Jack as a going away present. It surely must be true that it's an ill wind that doesn't blow to someone's advantage.

Dyehouse Lighting

Item 6. The basis for this subject is really a honey, but the general problem isn't very serious because so few people seem to use developed colors any more. Anyway, it just goes to show.

There was a mill (in Leaksville, N. C., I believe), that dyed raw stock as well as yarn in warp form. The reason I happened to be in the dyehouse this particular day was that I was starting up a new raw-stock dyeing machine (mainly by just wandering around and watching the regular help go through the regular motions).

It was fairly early in the morning of a bright sunny day, and I had been looking at some splotched warps with the Boss Dyer, more out of idle curiosity than real interest. He said the trouble had driven him back to drink, and from the aroma, I believed the drink part at least. The warps were dyed with Primuline, and occasionally there would be a sharp yellowish band in the red strand, so I asked him about light exposure. He looked at me contemptuously and pointed to windows high up in the wall and, sure enough, they had been thoroughly painted with



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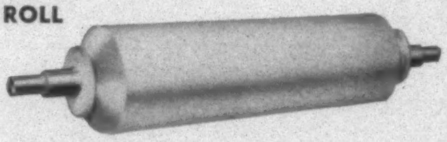

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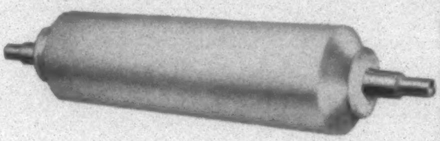

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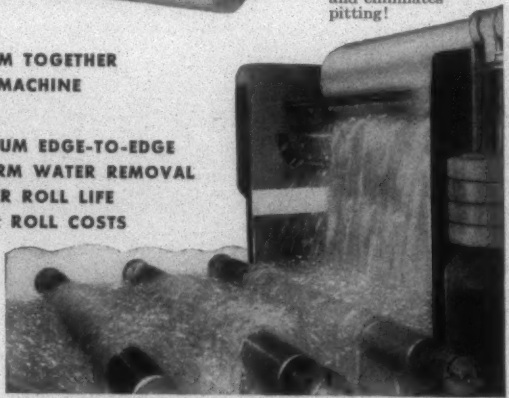

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some kind of blue kalsomine. So that seemed to be about that, and I found a seat on a bale of cotton and just sat there waiting for the time to leave on the early afternoon train.

To my right was the warp dyeing rig, and periodically the warps would be stopped for one reason or another. The box nearest to me contained the diazotizing solution and the smell was pungent—not unpleasant in dilute quantities if you like dyehouse smells.

Suddenly the warps stopped again, and just as suddenly a sharp shaft of sunlight shot through a small hole in one of the blue window panes. It hit the diazotized warps like a searchlight beam and stayed on the one spot until the machine started up again.

Well, I was pretty young and had been to textile school and I had begun to have a feeling that the old-time Boss Dyer just didn't care too much for me. However, I called him and showed him the miniature searchlight and asked him to keep the warps stopped and tie on a marker to later check for location. He cussed about those 'damn textile schools' and spat tobacco juice close to my good shoes, but he did what I had suggested.

Before I left (and I deliberately delayed leaving), he had sent a boy up a ladder to paste a piece of brown paper over the hole in the window. He wasn't such a tough character at that, but I just can't remember his name.

Dye Scales And Balances

Item 7. There isn't much to say about this, except to suggest that you have your balances and scales checked periodically for accuracy, with known weights. The bearing points easily become corroded or stuck with surplus dyes and can gradually throw off-shade any well-established formula. Sometimes they become too inaccurate for good work even after cleaning. Buying a new set is cheaper than headaches and redyes.

The Drug Room

Item 8. Now here is a subject which has had belated but deserved attention from mill architects. If at all possible, this room should be in a separate area, have no windows, and have a carefully designed ventilating system with vents placed where there is the least likelihood of prevailing winds carrying color particles into any wet-processing department. The floors should be of hard brick or treated concrete, or even tile, if you think you can afford it. And there should be a good slope from all points to a drain fitting in the floor for frequent wash downs. The walls and ceilings should be of some material that is not inclined to catch and hold loose particles of color. Here again tile would be ideal as a material. There are such drug rooms in existence, and those with whom I have discussed them are sure they are worth their cost.

The lighting should be ample or better, and the temperature and humidity should be maintained about as you would keep your office. Drafts *outward* to the dyehouse should never be allowed, and a big exhauster fan in the ceiling will help keep a slight vacuum in the room even when one enters or leaves it.

Dry dyestuffs should never be taken from this room. They should always be thoroughly wet out after weighing and then passed through a window to the dyehouse, fully dissolved in the drug room and piped outside. If y think I am trying to be facetious, just talk to any go mill architect and get his views.

Traffic into and out of the drug room must be kept a minimum. Contaminated shoe soles can spread a lot color to other parts of the mill.

It would be an interesting visit if you could get invitation to go into one of these emporiums.

Raw Stock And Greige Goods

Item 9. Some of the oddest and most obscure causes dyeing problems in my experience have originated befo the material ever got near the dyehouse.

Raw materials, especially the natural fibers, vary widel in dyeing qualities, just as they do in other qualities. Ra material, be it yarn or raw stock or piece goods, fron different sources often shows marked variables in bleachability or dyeability. I feel sure all experienced dyers recognize these features, so I won't dwell on these natural variables. The few things I am going to outline are decidedly on the screw-ball side, by way of contrast.

Rat urine on stored greige goods can produce some weird effects when one tries to bleach or dye such merchandise. I haven't heard any comment on this for a long time, but I know there must still be rats in some mills, therefore this factor must still present occasional difficulties. About the only way to identify it as a cause, is by that certain odor. At least I can't think of any other test.

Condensate-drip from roofs, rafters and other overhead structures has claimed its share of damaged goods. Where there is evidence of overhead condensation, keep your goods well covered as long as they may be exposed. The abnormal effects can be as varied as is the material from which the drops fall.

Centrifugal pumps and other rotating machinery can thoroughly spray raw goods if the exposure is favorable, and if the stuffing box of a pump allows too much leakage along the rotor shaft. A fine mist of whatever is being pumped will get on whatever is within range. I have seen this happen time and time again, so if there is any place in your mill where goods are exposed to this hazard, be sure to have the pump covered with a suitable shield.

The same principle applies to any high speed rotating part of any machine. Oil is, of necessity, used on high speed parts, and any excess of oil will be flung off by centrifugal force. Shield such danger areas or keep your material away from them. Shielding is a lot easier.

An often unconsidered source of spots and contamination is the very trucks or containers used for transporting goods about the dyehouse and drying area. Such trucks as are used for colors should *never* be used for bleached work and vice-versa. Trucks which are used to handle materials which have had special finishes or chemicals applied must always be used for just that purpose, unless they can be thoroughly cleaned and properly identified. The same caution applies to any piece of equipment with which any dissimilar goods will come in contact. Failure to observe these common sense practices has led to some of the most difficult problems I have ever faced. The fact that the need to do so is logical makes it hard to believe that this type of carelessness has crept in. As a result, you are likely to go all around your elbow to finally get to your thumb.

Then there's the colored crayon angle. Some mills identi roving, yarn and slubbing with various colors of chalk cr on marks. Sometimes (more frequently years ago), th e color particles are neither susceptible to washing, nor tc leaching. As a consequence they travel along right into th fine dress goods, hosiery or underwear which may be tl end product. I have sometimes had the feeling that there is school for smart buyers where the students are especially tr ned to nose out such tiny flaws in what is otherwise p fectly sound, first quality merchandise. Trained or not th y find them, and it costs the mill money in down-graded g ds.

One final thing, and this is about the insidious lipsticks, tl face rouges and the eyebrow pencils. Such trouble b eding origins are really rough to track down, but if y u just put yourself in the place of a young girl working ir a hot room with plenty of dry fabric around, you will quickly decide to do just what she will do. You mop your fevered brow with a pair of stockings or some delicate underwear, and right there the Boss drops anything from a dollar on up. A lot of these colors are not only kissproof, they are bleachproof and boilproof. I don't know what the correct answer is here, either. Maybe a nice clean face towel every morning for every girl would help all concerned.

Don't Assume, When You Can Substantiate

Item 10. All through the above nine items I have tried to bring out the fact that most dyehouse problems are basically simple in origin. *If* you study them, and try *not* to accept the most apparent reason causing them, you are going to have a lot of fun and perhaps you are going to save somebody's job. It may even be your own.

Maintenance, Engineering & Handling

It Eliminates The Fog

Airless Spray Painting For The Textile Mill

This is a report of a demonstration held at Drayton Mills, Spartanburg, S. C., by Wil-Nor Inc., Charlotte, N. C., for the purpose of showing that spray painting is practical in textile mills. This is made possible through use of airless spray painting and a newly developed paint.

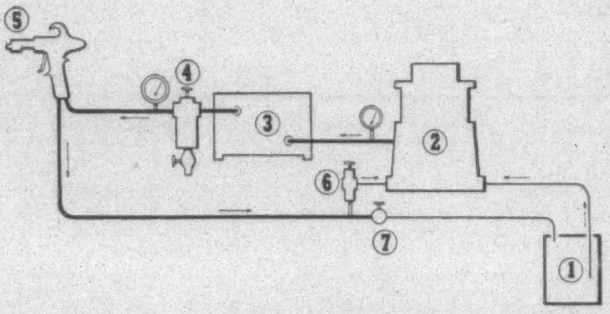
By JOHN LAWING, Assistant Editor

AIRBORNE fog, the fly in the ointment as far as the use of spray painting in textile mills is concerned, is no longer a problem in spray painting, according to representatives of Wil-Nor Inc., Charlotte, N. C., distributors of the Nordson airless spray, product of the Nordson Corp., Amherst, Ohio. The airless spray system, which is said to eliminate airborne fog, has been used for several years in industrial applications but has only recently been suggested for mill application.

O. S. Noreen, vice-president of Wil-Nor, showed some 150 mill men, paint contractors and other interested persons the capabilities of the device for mill painting at a recent demonstration at Drayton Mills, Spartanburg, S. C. The demonstration was jointly sponsored by Olney Paint Co., Spartanburg, which has developed a new mill white for use in airless spray. Although shelf goods materials can be applied by the airless method, it is recommended that paint and coatings which have been designed for this application be used.

"Previously," said Mr. Noreen, "if you sprayed paint in one room, closed and locked the door, the paint fog would show up in the other end of the plant. . . . Airless spraying virtually eliminates this fog."

The airless spray system utilizes heat and hydraulic pressure to accomplish its ends. A high proportion of volatile solvents are used in the coating to be applied. The paint is pumped from the supply container into a heater where its temperature is raised to between 120 and 400° F. It is then forced out of the nozzle of the gun under a hydraulic pressure of 300 to 600 p.s.i. When the material is emitted, a "vapor burst" occurs resulting in extremely fine particles of paint which have already begun to dry when they strike the surface. This so-called vapor burst enables the paint to cover evenly and dry quickly. In cases of by-pass spraying



This diagram shows the operation of the airless spray system in a simplified form. The coating material is drawn from the supply container (1) by the pump (2) and is pumped to the heater (3). From the heater the paint is pumped through the high pressure filter (4) to the spray gun (5). The excess paint is then returned to the pump through the circulating valve (6). In the case of cleaning, a solvent replaces the paint in the supply container and is drawn off through the drain-off valve (7).

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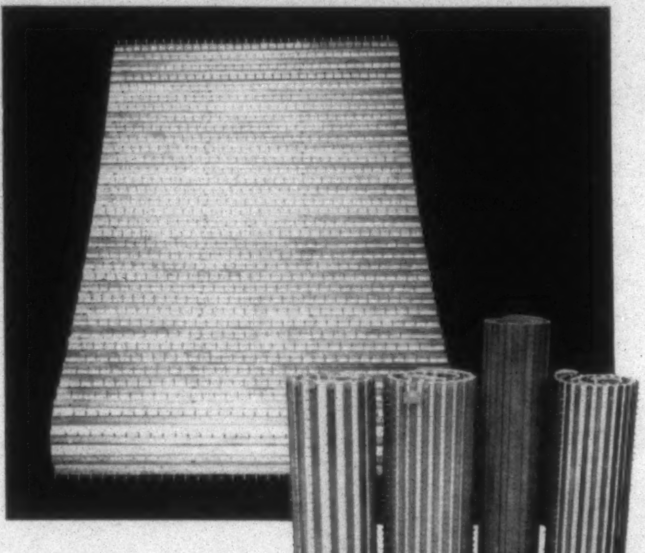

TYPE R-128 (ABOVE) chain-back, Spike-Slat Apron with hard Maple slats mounted on forged steel chain is ideal for hard shock conditions and long wearing ability. Chain also available in rust-resistant steel.

TYPES R-128 AND R-143 (RIGHT) shown rolled for shipping. Type R-143 — Hardwood, slat-apron made on forged steel chain. Made in any length or width to specified need.

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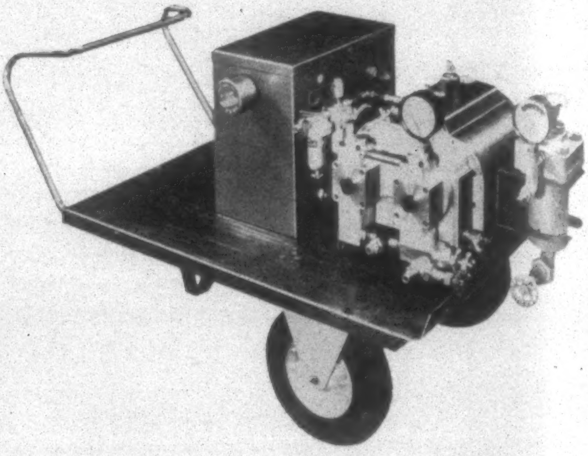
where it is necessary to spray close to a corner or edge and some of the paint is sprayed into the air, the paint particles will travel only a few feet and fall to the floor where they can be swept up as powder.

While the airless system is in operation, whether spraying or not, a certain amount of the paint is returned to the heater through a return line and is kept circulating through the system so that it does not have an opportunity to harden in any area and is kept at the right temperature and pressure.

The heater is a four-kilowatt, 220-volt, 60 cycle single-phase, a.c. unit with coils cast in aluminum blocks. The pump utilizes an air-powered reciprocating piston motor with special valving designed to operate at all loads without pulsations in order to maintain a constant paint flow rate.

The new method of spray painting is reported not only to eliminate fog but to give a non-sag covering faster with less paint than any other method. Coverage at Drayton Mills was reported to be 307 square feet per gallon and it was commented that two-thirds of the area was very spongy dry decking erected seven years ago and necessitating three coats. Paint savings of up to 50 per cent are said to be possible with the unit.



The newest airless spray unit is shown here mounted for use as a portable. The heater is on the left, the pump on the right. The supply container would be placed on the floor under the valve at the far right.

Although the demonstration was not held in the manufacturing area of the plant, Noreen said that it is applicable for such use and that with the development of Gilman Airless Spray Mill White, plans are now being made by some textile mills for such application. The only protection necessary for machines is said to be that which would be used with brush painting. Machines must, of course, be protected from the direct spray as they must be protected from spatter in the case of brush painting, Noreen pointed out.

Because of the temperature and fineness of the particles, the airless spray also eliminates rebound. In a dramatic demonstration of this, Noreen spray painted the interior of a 50-gallon drum without any signs of paint mist or fog rising out of the drum. He said the difference between airless spraying and spraying with air pressure in respect to rebound is the difference between throwing a high-viscous liquid such as molasses against a wall and a low-viscous uid such as water—the water splashes and rebounds, the lasses adheres.

A number of guns can be operated from a single heater unit further increasing the speed with which a painting operation can be completed. A pole gun is also available for the unit. It is 12 feet long and weighs only seven pounds. Approximate cost of the complete unit is $2,500.

Cone Mills Corp.

Greensboro, N. C.

Bulk Handling Of Starch Results In Substantial Savings

This article describes the new bulk handling facilities at Cone Mills Corp.'s White Oak Plant. It first appeared in THE TEXTORIAN, the company's newspaper. The system is described in detail from railroad siding to size box in both words and pictures.

NEW starch handling equipment at the White Oak Plant of Cone Mills Corp., Greensboro, N. C., has resulted in substantial savings in material cost and handling. Now, instead of wrestling with countless numbers of bags of starch and covering himself in a cloud of starch dust, the operator only manipulates valves, push-buttons and automatic controls to do a better job of size making.

White Oak has recently installed this special equipment at great savings in handling the approximately three million pounds of starch required each year in the slasher room. The new equipment consists of facilities for unloading, storing and handling the dry starch in bulk instead of in bags and of new cooking kettles and homogenizers for producing a more uniform finished size. In preparation of size for the slashers, the dry starch is mixed with cold water, partially cooked for a short period of time and homogenized.

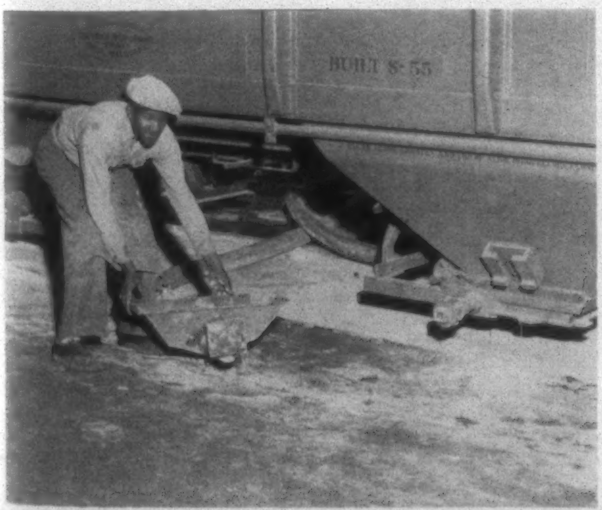


Fig. 1—Metal pans with flexible metal hose connections are shown here being attached to hopper bottom outlets of railroad car. Powdered starch drops from the car into pans and is conveyed by air into the storage tank.

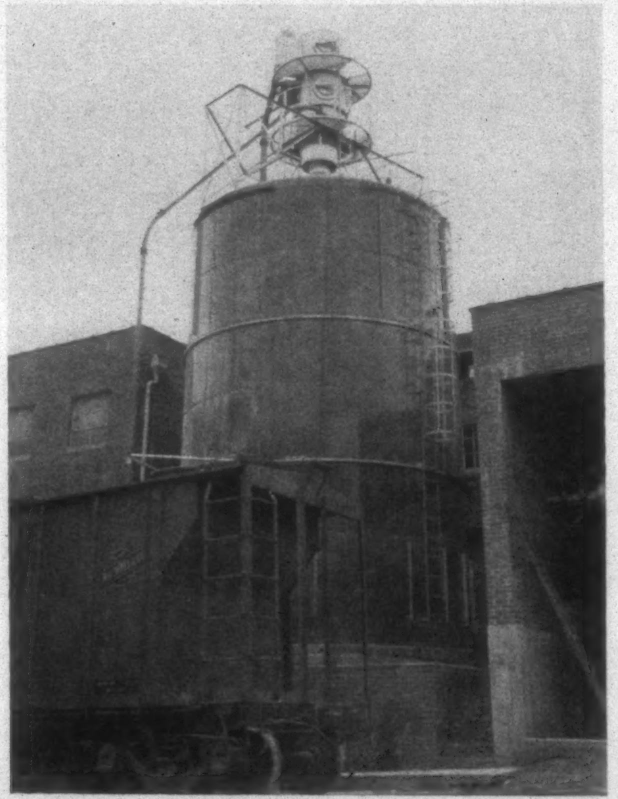


Fig. 2—The glass covered steel storage tank is topped by a filter unit. The tank holds four carloads of powdered starch. The filter unit separates starch from conveying air.

Powdered Starch

The powdered starch is received at the plant in a special two-compartment hopper-bottomed dust-tight railroad car, having two pairs of steep-sided bottom outlets with sliding gates. To unload a car, the operator merely clamps two metal unloading pans with flexible metal hose connections onto one pair of the car outlets, opens the gate and starts up a vacuum pump which pulls a stream of air through the pans. The starch then drops from the car down into the pans and the air stream. It is carried by the air through a pipeline up to the top of the storage tank.

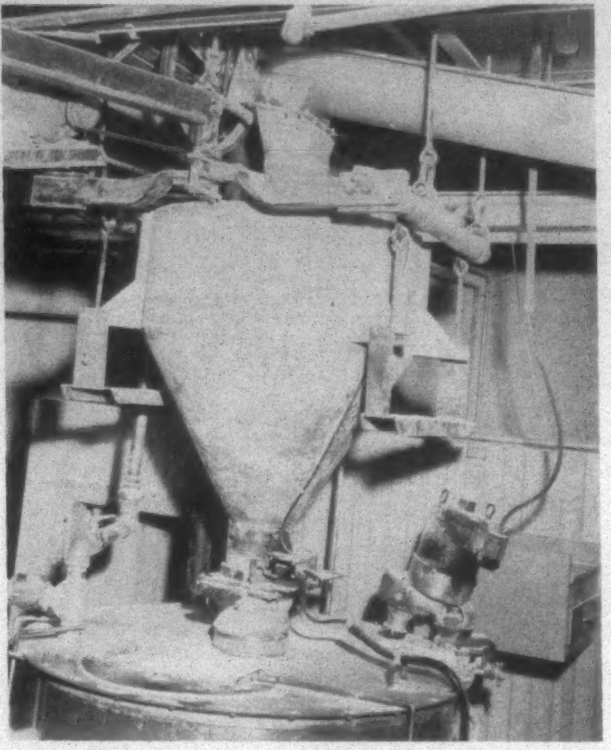


Fig. 3—The screw conveyor, weigh-hopper and cold slurry tank are shown here. Starch is conveyed directly from the storage tank into the weigh-hopper where it is weighed automatically. It is then mixed with cold water in the slurry tank and pumped as starch slurry to the cooking kettles.

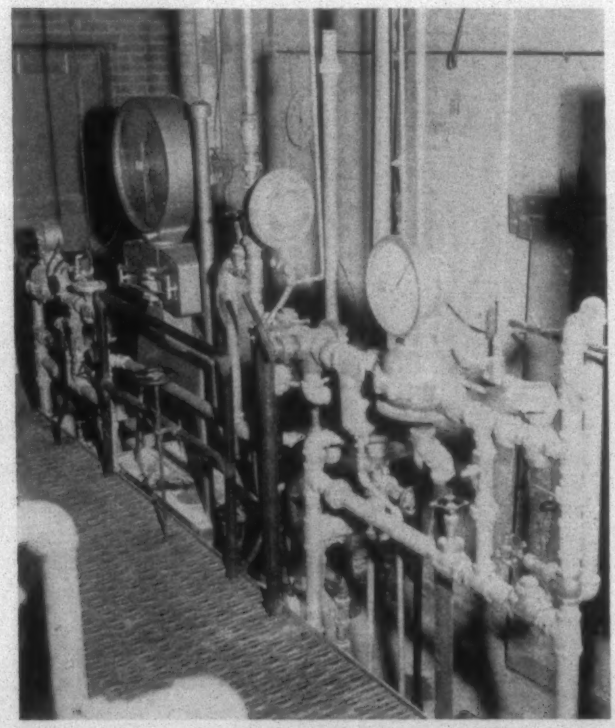


Fig. 4—The automatic scales and meters are mounted conveniently. The meter at the far left measures water into the cold slurry tank. The one at the right measures starch slurry and water into cooking kettles. The scales weigh starch into the weigh-hopper.

Here the starch is separated from the air in a filter tank having cotton cloth filter tubes and is dropped into the storage tank. Except for shifting the unloading pans when the first compartment of the car runs empty, the operator does not have to tend the car while the starch is being unloaded. It takes about six hours to unload the car.

The storage tank holds four carloads of starch. It is constructed of steel plate, glass-coated inside and out for protection against corrosion by the starch and by the weather. In the bottom of the tank is a special unloading mechanism which has an arm which sweeps the bottom of the tank like a hand on a clock. This drags the starch to the center of the tank where it drops down onto a chain conveyor recessed into the floor of the tank. This carries it on out of the tank.

Size Mixing

When the operator is ready to make up a batch of size he closes a gate on the bottom of a weigh-hopper inside the starch room. As the gate closes, it automatically starts up the unloader in the bottom of the starch storage tank. This feeds starch into the end of an inclined screw conveyor which carries the starch up into the weigh-hopper. As the starch drops into the weigh-hopper it is weighed by a set of dial scales. The storage tank unloader and screw conveyor are stopped automatically when the right amount of starch has been fed into the weigh-hopper.

To get the powdered starch from the weigh-hopper into a cooking kettle, the operator mixes it with cold water and pumps it over in the form of a slurry. When the weigh-hopper becomes full the operator opens the gate on the bottom of the hopper and dumps the starch into a slurry tank. As the gate opens, a water meter starts measuring water into the tank to mix with the starch. After the correct amount of water has run in, the meter automatically cuts off.

After the dry starch is thoroughly mixed with cold water in the slurry tank the operator pushes a button which reverses automatic valves and the starch slurry is pumped from the slurry tank into the cooking kettle. The slurry goes through another meter which cuts off automatically after the proper amount of slurry has been pumped. More

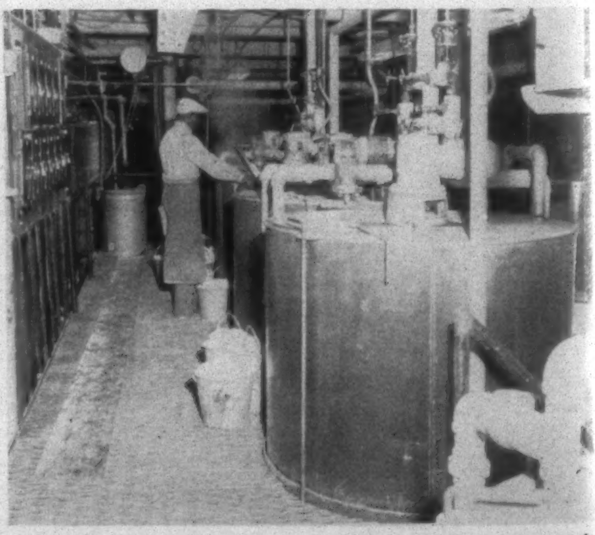


Fig. 5—This view shows the four stainless steel 500-gallon cooking kettles with automatic cooking and homogenizing control instruments on the left.

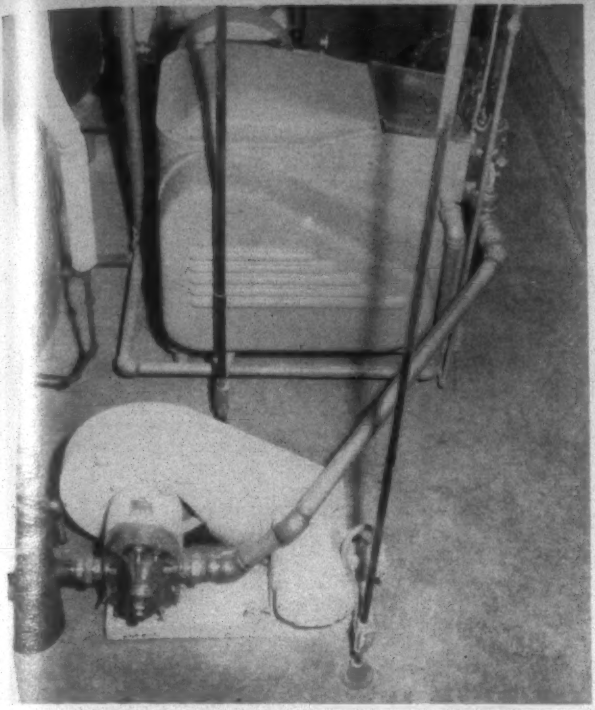


Fig. 6—This photograph shows one of the two 800-gallon per hour homogenizers in use. The pump in the foreground transports starch from the cooking kettles to the homogenizer.

cold water is automatically metered into the starch slurry and the mix is then ready for cooking.

Cooking Cycle

Four 500-gallon closed-top stainless steel kettles with open steam coils and motor driven agitator paddles are used for partially cooking the starch before homogenization. When a batch of cold starch slurry is ready, the operator pushes a button and an automatic air-operated size cooking instrument with steam control valve takes over. The cooking is done automatically in about 30 minutes.

The operator then pumps the partially cooked starch from the cooking kettle over to one of the two 800-gallon per hour homogenizers. Here the partially cooked granules of starch are broken down under high pressure of 2,000 pounds per square inch into very fine uniform particles of finished size. It is then pumped to a storage tank and held until needed at the slashers.

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ocational Textile School Begins Classes

The North Carolina Vocational Textile School at Bel- ont, N. C., has announced the beginning of new classes September 2 and has issued an invitation to employers send a few of their better employees to the school on at day for a visit at either 10 a.m. or 4 p.m. Chris E. lk, principal of the school, expressed the opinion that ere are quite a number of textile employees who do not ve the proper information about the textile school. A it, he said, would give them a much better idea about operation of the school.

The school is designed primarily for mill employees who uld like to further their textile education while work- . Classes are held both in the morning and in the after- on. Courses in yarn manufacturing, weaving and de- ning, knitting, mill maintenance and tailoring are offered.

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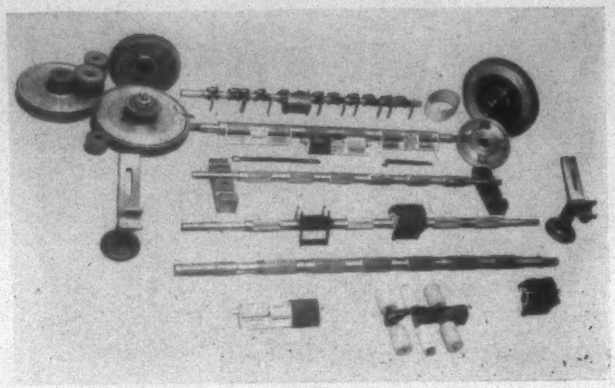

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PERSONAL NEWS

Marion W. Heiss

Marion W. Heiss, a vice-president and director of Cone Mills Corp., has been granted a leave of absence from his active management responsibilities. Heiss stated that his health has not been up to par recently and that he has asked to be relieved temporarily from active duty so that he can regain his normal health and again assume executive and administrative duties. The general direction of the Revolution Division operations in Greensboro, N. C., which has been one of Heiss' major management responsibilities, is being taken over by Lewis Morris, secretary of the company. Morris is a native of Salisbury. He has been associated with the corporation for 20 years, with service including operating experience at two of the company's plants before being transferred to Greensboro ten years ago.

Emil Doell, connected with the Singer Sewing Machine Co. for 25 years, has been named operations manager for Texize Chemicals Inc., Greenville, S. C., manufacturer of textile chemicals. He has been office and sales manager for the Poinsett Lumber & Mfg. Division of Singer at Pickens, S. C.

Frank K. Jones Sr., overseer of weaving at Newberry (S. C.) Mills, retired last month after 55 years' service with the company. Jones was presented with a watch in appreciation for his services.

Charles J. Mancke, chief engineer of the Fletcher Works, Philadelphia, Pa., world's largest maker of narrow fabric looms, throwing equipment and centrifugals, has been named director of sales engineering service for the Fletcher textile division. Mancke, a mechanical engineering graduate of the Drexel Institute of Technology, has been with the Fletcher Works for 29 years and has been responsible for many of the advancements made in the company's narrow fabric looms. In his new position he will concentrate on field contact with mills providing what Fletcher describes as "on-the-spot engineering service to solve production problems and increase loom efficiency."

Charles H. Burns, vice-president and controller, Fulton Bag & Cotton Mills, has been elected secretary-treasurer of the Atlantic Control of the Controllers Institute of America. Established in 1931, the institute is a non-profit management organization of controllers and finance officers.

Will Dicome, assistant manager of textile industry sales, Dow Corning Corp., is now located in New York City. Dicome's transfer has been made to enable Dow Corning to better serve the needs of the industry through closer and more frequent contact with top levels of mill and manufacturer management. As assistant manager, Dicome will be able to handle all problems on the spot. He will maintain close liaison with William T. Rossiter, manager of leather and textile sales, who will remain in Midland, Mich. Dicome, who has been with Dow Corning Corp. for five years, was previously with the technical service department of Charles Pfizer & Co. A member of the American Association of Chemists & Colorists, Dicome has a B.S. degree in chemistry from Allegheny College. He will work out of the Dow Corning branch office at 600 Fifth Avenue, New York City.

Malcolm V. Macfarlan has been named sales manager of the fibers division of American Viscose Corp. Macfarlan was formerly sales manager for the rayon division. . . . Norman A. Cocke Jr., former manager of rayon textile filament yar sales, has been appointed sales manager fo all rayon fibers except tire yarn. . . . Charle J. Mills continues as manager of acetat sales and Frank T. Williams as manager o rayon tire sales. . . . John C. Wilmerding, formerly manager of rayon staple sales, ha been named a staff assistant to Macfarlan to handle special assignments.

Charles R. Walters, vice-president of Abney Mills, Greenwood, S. C., has been named to head the special gifts division of the 1958-59 Living Endowment Campaign for Erskine College, Due West, S. C.

Maurice Winger Jr., secretary and assistant general counsel of American Enka Corp., has been elected a director of American Rayon Institute. Winger will be responsible for co-ordinating Enka's participation in the nation-wide rayon promotional program of the institute. The institute, which has headquarters in New York City, was formed in 1954.

Herman Cone

A number of management changes have been announced by Cone Mills Corp., Greensboro, N. C. Three new vice-presidents have been appointed. They are E. E. Jones, formerly manager of the Carlisle (S. C.) Finishing Co., Leonard England of Union Bleachery, Greenville, S. C., and Marshall Gardner, Proximity Print Works, Greensboro, N. C. . . . Herman Cone Jr. has been named manager of the Revolution Plant of the company at Greensboro. Cone is leaving his post as manager of the company's plants at Reidsville, Pineville and Gibsonville, which he has held for the past year. Prior to 1957, he was assistant manager of the Reidsville and Pineville plants. He has also been a member of the company's board of directors since 1956. . . . Stokes S. Rawlins has been named business manager of the Revolution Plant. He has been a member of the Revolution Division staff for many years, serving in various business and management capacities. He was secretary of the Revolution Cotton Mills Co from 1945 to 1947, when Revolution was merged with Cone. . . . Frank Starling has been named manager of Cone's Proximity Plant in Greensboro and the Edna Plant in Reidsville. He will retain his office in Greensboro. Starling started at Cone Mills

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more than 20 years ago in the carding department of the White Oak Plant at Greensboro and worked in various capacities including that of superintendent of the Proximity Plant in 1956. He attended Greensboro Evening College and holds an I.C.S. diploma. . . . John L. Sherrill has been named manager of the company's Pineville plant and the Minneola Plant in Gibsonville. He is returning to Greensboro after having been superintendent of the Pineville plant since December 1957. He was formerly in the cost department of the company's main office. He graduated from Davidson College with an A.B. degree and from North Carolina State College with a B.S. degree. He is a member of the Greater Charlotte Textile Club, the Southern Textile Association and Phi Kappa Phi, honorary scholastic fraternity. . . . Raymond Kincaid has been named to succeed Starling as superintendent of Proximity. He came to work at the plant 28 years ago and has served in many different capacities. His duties have included time study engineering and service as assistant superintendent. He attended Greensboro Evening College and Cone Mills Vocational School. He holds an I.C.S. diploma. . . . Jack Hughes has been named by the company to succeed Sherrill as superintendent of the Pineville plant. Hughes has been assistant superintendent of White Oak on the third shift since June 1956. He joined Cone in 1938 and was connected with the Revolution Division for many years. He attended King's Business College. . . . Robert F. Crews replaces Kincaid as assistant superintendent of Proximity. Crews joined the company upon graduation from Guilford College near Greensboro in 1953. He served as personnel assistant at Pineville and later as assistant overseer of weaving at Proximity. He has more recently been assistant overseer of spinning there. . . . Jennings Simpson, Proximity Plant technician, will be an assistant overseer of the plant's spinning department. Simpson joined the company in 1958 and has served in several plant departments as well as the laboratory and as quality control technician.

J. Kimball Waston

J. Kimball Watson was named vice-president of the Watson-Williams Mfg. Co., Milbury, Mass., last month at the company's annual meeting. Watson is a graduate of Duke University, Durham, N. C.

John Henry of Roanoke Rapids, N. C., has been named superintendent of Globe Mills Co., Lincolnton, N. C., succeeding D. C. Chandler.

Rene Bouvet, an assistant director of American Viscose Corp.'s technical and textile service department has retired after 19 years of service. Well known in the textile field, he has been involved in a wide range of programs for rayon and acetate from yarn to finished fabric. Born in France, he received his B.S. degree in textile engineering from the School of Commerce and Textiles in Lyon. Prior to joining American Viscose's research department in 1939, he had been affiliated with The Duplan Corp. for 17 years and Robbins Cloth for two years. In 1956 he was named an assistant director of the textile research department, which later was merged into the corporation's textile and technical service department. Bouvet is an active member of the American Association of Textile Technologists. After an extended tour of the U. S., he plans to work as a consultant in this country and in Europe.

Woodrow Metz has been named plant manager of the Peerless Plant of the Amerotron Co. in Belton, S. C., division of Textron Inc. Metz succeeds J. S. Ballentine, who has become plant manager of the company's operation in Red Springs, N. C.

R. P. Hardeman, general manager of the Ware Shoals, S. C., division of Riegel Textile Corp. recently received his quarter century pin from W. F. Robertson, vice-president for textile production for Riegel. Hardeman joined Riegel at Trion, Ga., in 1933, and was transferred to Ware Shoals in 1955.

Several executive changes in the Chemstrand Corp. have been announced by Edward A. O'Neal, president. H. C. Greer, vice-president, finance, is now vice-president and executive director, finance. . . . R. G. Hemminghaus, vice-president, manufacturing, is now vice-president and executive director of staff services. In his new

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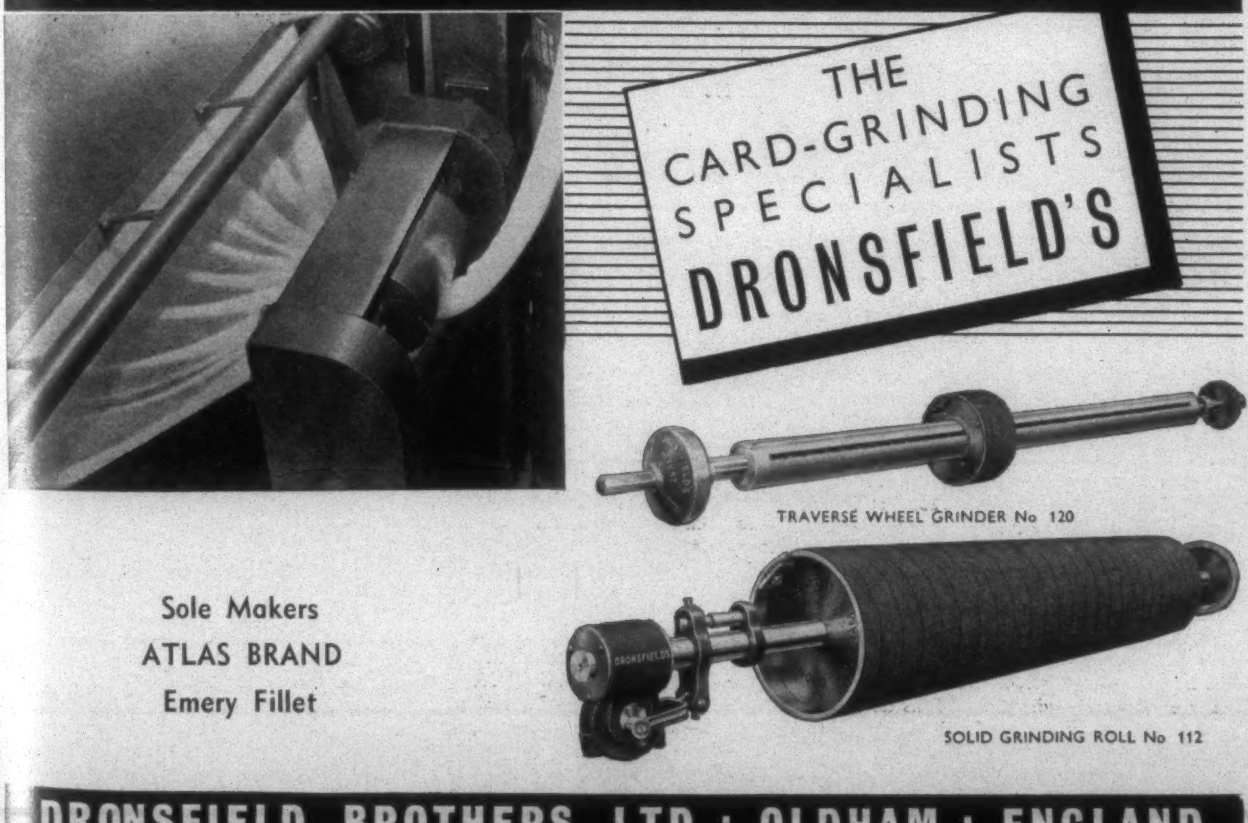

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assignment, he will devote particular attention to the acceleration of training and development programs. . . . C. O. Hoyer, vice-president, engineering, is now vice-president and general manager, manufacturing and engineering. The present separate manufacturing and engineering divisions are combined into a new manufacturing and engineering division. This new division also will incorporate the development function (now a part of the research and development division) in its engineering and development. . . . H. Hadden Jr., secretary and director of the legal department, is now executive director, legal, public and foreign services. He also continues as secretary. . . . P. W. Runge, technical superintendent of the nylon plant, is now executive director, nylon, and is responsible in a staff capacity for activities affecting the success of the nylon product group. . . . R. E. Smith, Acrilan sales manager, is now executive director, Acrilan, and is responsible in a staff capacity for activities affecting the success of the Acrilan product group. . . . Dr. D. W. Chaney, assistant director research, is now executive director, research. . . . F. G. Gronemeyer, vice-president and nylon plant manager, is now vice-president and director of nylon manufacturing. . . . Dr. K. Johnson, Acrilan plant manager, is now director, Acrilan manufacturing. . . . E. T. Powers, director, market research and product development, is now director, market planning and development. The activities of this department have been transferred to the market division. . . . W. H. Hindle, associate director, textile research, is now director, applications research. The activities of this department have been transferred to the marketing division.

L. L. Froneberger

L. L. Froneberger Jr. has been appointed vice-president of The Bullard Clark Co. of Charlotte, N. C., and Danielson, Conn. In this new capacity he will be responsible for the supervision of sales activities in the South for the E. H. Jacobs Southern and Northern Divisions of Bullard Clark. Froneberger, who has been with the company over 20 years, has served in the Charlotte, N. C., plant as a service engineer and, more lately, as district sales manager.

Mr. & Mrs. B. A. Simpson have recently moved into their new home at 1200 Providence Road, Charlotte, N. C. Simpson was formerly an executive with the Oakboro Cotton Mills, Oakboro, N. C., and is now retired.

E. T. Cuddeback has been named manager of general products division sales, Southeast region, by Allis-Chalmers, Milwaukee, Wisc. He will maintain his headquarters in the firm's regional office in Atlanta. In his new position, Cuddeback is responsible for the promotion, planning and co-ordination of sales through the district offices, for Allis-Chalmers motors, pumps, motor controls and Texrope drives. He is a 1930 graduate of Syracuse University where he received a B.S. degree in administrative engineering. He joined Allis-Chalmers in 1946 and was assigned as a sales representative in the Atlanta district office. In 1948 he became manager of the Tampa district office and has been manager of the Florida district since 1952.

Wm. L. Boyd

William L. Boyd has joined the testing equipment division of the Uster Corp. as a sales engineer. A graduate of Clemson College, Boyd was formerly associated with Burlington Industries and more recently with Klopman Mills in the production and planning departments. He will be headquartered in York, S. C.

George Kleinman, formerly of the Whiting Corp.'s Houston, Tex., district office, has been transferred to the company's district office at Charlotte. Kleinman joined Whiting in 1949. He was transferred to Houston in 1953 as an engineer specializing in Swenson chemical processing equipment. He is a graduate of the Illinois Institute of Technology and holds a bachelor's degree in chemical engineering. The Whiting office in Charlotte is located in the Liberty Life Building.

Conrad Hohing has been appointed quality control superintendent for the Onyx Oil & Chemical Co., Jersey City, N. J. Hohing was formerly supervisor of development and utilization of yarn lubricants for the Celanese Corp. of America at the Cumberland, Md., plant. He has been with Celanese for the last 12 years. In his new position, Hohing will be responsible for product quality control. He is an active member of the American Society for Quality Control and holds a chemistry degree from the University of Maryland where he was graduated in 1943.

Harold Clark has been named head of manufacturing and sales of nonwoven fabrics at Avondale Mills, Sylacauga, Ala. He succeeds Cassius M. Stanley Jr., who has left the company. Clark was previously in charge of the company's service department.

Cassius M. Stanley Jr. has joined Dan River Mills as superintendent of nonwoven fabrics and will make his headquarters in Danville, Va. A native of Alabama, Stanley is a graduate of Auburn. He has served as dean of the textile engineering department of Texas Tech at Lubbock, Tex., and prior to his appointment at Dan River was associated with Avondale Mills in Alabama for 12 years.

William F. Crowder has joined the Benjamin Booth Co. of Philadelphia, Pa., as a salesman for South Carolina. He will contact all mills in the state. Prior to joining Booth, Crowder had 20 years' experience in cotton yarn mills as overseer and superintendent. Most recently, he was with the B. S. Roy & Son Co. of Greenville, S. C. . . . Norman Bush, who has been covering the mid-Atlantic and Midwest areas for Booth, will also cover North Carolina. Benjamin Booth Co. manufactures card clothing, banding for spindle drives and condenser tape.

Walter S. Montgomery Jr. has been named assistant to Ridley Watts, executive vice-president of Spartan Mills Inc., Spartanburg, S. C. Montgomery previously worked in the Spartan, Beaumont and Startex Plants of Spartan Mills.

Smith Crow, 64, vice-president of Erlanger Mills, Lexington, N. C., was seriously injured recently when his car struck a power pole toppling the pole and transformer onto the car. He was taken to the North Carolina Baptist Hospital in Winston-Salem where he underwent surgery for broken ribs, a broken jaw, a broken nose and cheek bones and a knee injury.

George S. Falls, assistant secretary-treasurer of Rhyne-Houser Mfg. Co., Cherryville, N. C., retired from the firm last month. Falls began his work in the textile field in 1922 as clerk in the office of the combination of Cherryville, Howell and Rhyne-Houser Mfg. Cos. In 1938 he was made assistant to the secretary-treasurer. He served as mayor of Cherryville in 1929.

M. D. Link

Malcolm D. Link has been named superintendent of the Rockmart, Ga., mill of the Goodyear Tire & Rubber Co., succeeding P. W. Beggs who has retired. For the past 13 years, Link has been assistant superintendent of the Rockmart unit. He joined the company in 1929 and served in Decatur, Ala., for 11 years prior to being assigned to Rockmart. Retiring superintendent, P. W. Beggs, had served in that capacity since 1953. Prior to that he covered assignments in widely scattered points in the company's domestic and foreign operations.

J. B. Hughes has resigned as general plant manager at Aragon (Ga.) Mills. Frank Madden, Seminole Mills, another unit of United Merchants & Manufacturers, Clearwater, S. C., is currently acting as temporary manager.

Claude L. Hayden has been named general district sales manager of American Enka Corp., a newly created position. Hayden has for the past year been assistant to the vice-president in charge of marketing. Prior to this, he was assistant textile sales manager, and before that advertising and sales promotion manager. He will continue to make his headquarters at the firm's New York City offices at 530 Fifth Avenue.

John R. Hilton, superintendent, and M. H. Maner, office manager, have retired from the Columbia (S. C.) Mills of the Mount Vernon Mills, Baltimore, Md. Hilton is succeeded by Mack D. Heaton and Maner by J. A. Gayden Jr.

O. E. Isenburg, general manager of the Harmon Colors Division of B. F. Goodrich Chemical Co., has been elected president of the Dry Colors Manufacturers' Associ tion. After serving as vice-president of the organization for the past two years, Isenburg was elevated to the presidency at the recent annual meeting of the D.C.M.A., the members of which represent 27 producers of organic and inorganic color pigments.

James E. Britt has resigned his position as vice-president and general manager of Newberry (S. C.) Mills Inc. He had been with the company for the past 11 years and has not made his future plans known. Temporarily replacing Britt is William R. Fleuret of New York City, executive vice-president of the company.

Henry E. Millson of the dyes department of American Cyanamid Co., New York City, has been named to receive the 15th annual Olney Medal from the American Association of Textile Chemists & Colorists for his outstanding contributions in the field of textile chemistry. The award will be presented to Millson at the association's annual convention in Chicago, Ill., October 30-November 1. Millson, who joined the Calco Chemical Division of Cyanamid in 1937, is the inventor of the microdyescope and the author of some 50 papers on dyeing and related subjects. The microdyescope is an apparatus which made possible the first visual observation of the action of dyes on textiles.

Charles A. McLendon has been elected a vice-president of Burlington Industries. McLendon, executive assistant to the chairman and president, is senior personnel executive of the company and assists in guiding broad merchandising policies. He joined Burlington in 1948 in its hosiery manufacturing operations and later served as personnel director for the company's Southern area before transfer to New York in 1954 as personnel director of the New York sales organization. He is a graduate of the University of North Carolina and attended North Carolina State College.

Dr. James Langston, for 12 years professor of textiles at Clemson College, has been appointed head of the department of chemistry at Howard (Ala.) College. Dr. Langston was elected president of Clemson's Faculty Senate in May. He assumes his new duties in September.

Frank Myers, assistant branch manager in the Charlotte, N. C., office of Geigy Dyestuffs division of Geigy Chemical Corp., will move into the manager's post on January 1, succeeding Howard Sprock, who is retiring. Myers has been with Geigy for 24 years, joining the firm as a salesman in Chattanooga, Tenn. Later he moved to Chicago as Midwestern sales manager and then to New York City as New York sales manager. Last year he was assigned to Charlotte as assistant branch manager.

Norfleet M. Gibbs has joined the Southern sales staff of fiber sales and service, National Aniline Division, Allied Chemical Corp. Gibbs will make his headquarters at Greensboro, N. C., and will service all accounts on sales of Caprolan polyamide staple and filament yarns. Prior to joining Allied Chemical, he was a member of the sales department of Special Yarns Co. Inc., Rutherfordton, N. C. He is a graduate of North Carolina State College.

William B. Lavender

William B. Lavender has joined the Putnam Chemical Corp., Beacon, N. Y., as sales representative in Charlotte, N. C. Lavender was formerly with Dyer S. Moss Inc. and Carbic Moss Co., both of Charlotte. Putnam is the U. S. distributor of dyestuffs, intermediates and textile auxiliaries of Badische Anilin & Soda Fabrik, A. G., Ludwigshafen, West Germany.

OBITUARIES

D. W. Hale Church, 60, who pioneered in work on Orlon and on Dacron for the Du Pont Co., died July 25th. At the time of his death, Dr. Church was directing Du Pont's pioneering research laboratory. In this position, he administered a research program in the textile fibers department directed chiefly toward development of new types of synthetic fibers. In addition to Orlon and Dacron, Dr. Church did early work on Du Pont's newest fiber, Fiber K, a synthetic elastomer textile fiber with rubber-like properties. He was especially known

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for his work as head of a research group that developed moisture-proof cellophane in 1927.

John Hastings Cutter, 79, prominent textile executive of Charlotte, died last month. He was founder of the J. H. Cutter Co., cotton dealer, and the Cutter Mfg. Co., Rock Hill, S. C., which he operated from 1927 until 1947. Survivors include his widow, a son and a daughter.

Charles Richmond Danielson, 48, widely known textile executive, died in Rockmart, Ga., last month after several weeks' illness. A native of Portland, Ore., Danielson had been connected with the United Merchants & Manufacturers Co. for the past 27 years. A textile designer, he was employed at the company's Brookfort plant, Hickory, N. C., prior to being transferred to Rockmart some 18 months ago. Surviving are his widow and four daughters.

Thomas Hampton Henderson, 81, a vice-president and director of Clinchfield Mfg. Co., Marion, N. C., died last month following an illness of several months. Henderson served as superintendent of the mill for 37 years prior to becoming a vice-president in 1955. He also served as a director of the Marion Industrial Bank and had served on the city school board for 23 years. Surviving are three daughters.

A. Lee McArthur Jr., 54, director of transportation for Burlington Industries, died August 4 in Greensboro, N. C. From 1937 to 1946, he worked as secretary and director of Cramerton (N. C.) Mills. He joined Burlington when it acquired the Cramerton Mills in 1946. His widow and three sons survive.

Elvin B. Robinson, 57, vice-president and general sales manager of Ideal Machine Shops and Ideal Industries, Bessemer City, N. C., producer of a ball-bearing drafting system for drawing frames, died recently. Robinson was the inventor of the Feather-Touch system which resulted in the formation of Ideal Industries. He was formerly with Groves Thread Co. and Gossett Machine Works as a salesman. Surviving are his widow, two sons and three daughters.

Charles Gordon Tate Sr., 76, former president of Alpine Cotton Mills, Morganton, N. C., died recently in Morganton. Tate headed Alpine from 1936 until the mills were sold in 1946. The plant is no longer in operation. Survivors include his widow and a son.

Robert J. Freitag, 83, vice-president and treasurer of Steel Heddle Mfg. Co., Philadelphia, Pa., died August 12. A native of Switzerland and a graduate of The Textile Institute of Zurich, Mr. Freitag retired in 1950 after 40 years with the firm.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

FORT MILL, S. C.—The Springs Cotton Mills here has begun the use of natural gas for firing its boilers. This is the second of the Springs Mills to change to natural gas. The first was the bleachery at Grace's Station, S. C. Two more of the company's plants are in the process of switching over to gas. The next will be the Kershaw (S. C.) Plant and later the Eureka Plant at Chester.

TRION, GA.—Riegel Fiber Corp., a newly-formed subsidiary of Riegel Textile Corp., will have headquarters here, according to John L. Riegel, chairman of the board. The new organization will take over all the functions of the present cotton purchasing division, including the purchase, warehousing and sale of waste and other related functions. Officers of the organization are German H. H. Emory, president; J. Florence, vice-president; Donald K. Evans, secretary and treasurer; and Harold Florence, manager.

McCORMICK, S. C. — McCormick Mill here has been presented a safety award certificate by the Safety Division of the State Department of Labor. The mill was 76 per cent below the state level in accidents for the textile industry. This was the mill's fourth consecutive award.

ROME, GA.—All fabrics being produced in the plant of Dan River Mills, here, will be run out as rapidly as possible and the plant will be closed, according to R. C. Gourley, superintendent of the company's Alabama division. It is expected that the run-out operation will be accomplished by October but some machinery will be stopped at an earlier date as production commitments on that machinery are completed. Employees, now numbering about 400, have been informed of the plans to terminate production. Final plans for the future of the Rome plant have not been determined, Gourley stated. He said tentative plans call for movement of some of the machinery to other units of the Alabama division and to the company's headquarters plant in Danville, Va., where it can be utilized on other fabrics currently in greater demand.

SALISBURY, N. C. — Construction of a large warehouse is under way at North Carolina Finishing Co. here. The building will be located at the northwest corner of the present structure and will provide about 40,000 square feet of warehousing space. It will be of brick and steel construction with a concrete floor. A conveyor belt system and steel racks are expected to make the warehouse operation more efficient, company officials said. In addition, the warehouse will have a larger shipping dock for trucks.

DANVILLE, VA.—Consolidated net sales of Dan River Mills, for the first six months of this year totalled $79,642,822. This represents a decline of approximately three per cent from the record sales volume of $82,220,320 in the comparable period a year ago. Earnings on operations, after provisions for income taxes and minority interests, amounted to $2,281,684 or 49 cents a share for the 26-week period ended June 28. Net earnings for the like period last year were $2,616,949 or 56 cents a share. These figures do not reflect non-recurring income of approximately $650,000. For the second quarter ended June 28, sales were $39,011,697. Net profit was $1,034,016 or 22 cents a share.

BALTIMORE, MD.—Mount Vernon Mills has reported a net income after taxes of $80,000 or ten cents a share for the six months ended June 30, a decline of about 82 per cent from the net income of $441,000 for the comparable period last year. Sales for the period totalled $19,398,000 against $22,487,000 for the corresponding period last year. Thomas Bancroft, president, said that the decline in sales volume in the second quarter of 1958 was reflected in earnings of only $4,000 for that period. No action was taken by the board of directors on the payment of a common stock dividend in June because of the disappointing earnings and unfavorable business conditions.

GREENSBORO, N. C.—Cone Mills Corp. here reports lower sales and earnings for the six-month period ended June 30 compared with the same period last year. Consolidated net sales were $81,108,379 compared with $85,801,734 in the first half of last year. Earnings were $1,784,656 or 49 cents a share compared with $1,996,611 or 55 cents a share last year.

NEW YORK, N. Y.—Consolidated net sales of $485,126,000 for the nine months ended June 28 have been reported by Burlington Industries Inc. In the nine months ended June 29, 1957, consolidated net sales were $502,087,000. After income taxes of $9,456,000 and minority interests in earnings of $229,000, net earnings from operations for nine months ended June 28, 1958 were $7,816,000. After preferred dividends net earnings from operations were equal to 80 cents per share on the 8,479,248 common shares outstanding. After deducting income taxes of $13,777,000 and minority interests in earnings of $535,000, net earnings from operations for the nine months ended June 29, 1957, were $10,704,000. After preferred dividends these net earnings were equal to $1.14 per share on the 8,438,430 common shares outstanding at June 29, 1957. In addition there were non-recurring capital gains of $580,000 realized on sales of fixed assets and investments during this nine-month period.

McCOLL, S. C.—Morgan Mills, which recently purchased three plants here from William L. Barrell Co., was scheduled to begin operations in one of the plants sometime this month. Another one of the plants is expected to go into operation by the end the year and the third plant will be sold. spective purchasers are reported to have ited the property of the third plant and be negotiating with the company.

Boston, Mass. — Pepperell Mfg. Co. re had a net income of $1,843,000, equal $3.79 a share, for the fiscal year ended ne 30. This compares with net operating ome of $2,309,000 or $4.75 a share in previous year. Sales for the latter year re $80,934,000 as compared to $89,969,-0 in the previous year. Directors de-red a regular quarterly dividend of 75 nts a share, and a year-end extra of 50 nts.

Clover, S. C.—American Thread Co.'s ampton Yarn Division here has begun a e-blending operation that will pre-mix cotton from as many as 1,000 individual bales. A two-story, 20,000 square foot building has been constructed and ten new openers, six blenders and a hydraulic rebaling press have been installed.

New York, N. Y.—Riegel Textile Corp. has reported a decline of 78.2 per cent in its earnings in the 40 weeks ended July 5, as compared with the same period last year. A drop of 11.5 per cent in sales was reported for the period as compared to last year. Net profit after taxes for the 40-week period this year was $437,999 against $2,013,195 in the like 40 weeks last year. Sales totalled $60,932,324 this year compared to $68,876,353 last year. In a stockholders' report it was noted that the Prudential Life Insurance Co. of America purchased from Riegel the second $4.5 million of the $9 million of notes to be issued under a loan agreement. The proceeds have been used to pay off $4.5 million of interim bank notes.

Seneca, S. C.—Work has begun on the installation of air conditioning equipment for the first floor weave room of the Seneca plant of J. P. Stevens & Co. Total cost of the project will be about $150,000. The job is expected to be completed by mid-October.

Gaffney, S. C. — A combined total of 3,821,449 hours without a lost-time accident have been attained by three weave rooms of the Limestone Mfg. Co.'s plants here. Liberty Mutual Insurance Co. recently presented special awards to the three rooms for the unusual safety record.

Kings Mountain, N. C. — Carolina Throwing Co. here has purchased equipment which will virtually double its production of nylon Fluflon yarn. The company purchased all the Fluflon machinery and equipment of Blackwelder Textile Co., Cherryville, N. C. Fluflon is a trade name for nylon stretch yarn used in the manufacture of hosiery, knitted sportswear, bathing suits, sweaters and other products. The company is also currently expanding its plant facilities by the addition of a 3,456-square-foot, two-story structure. It has also purchased 00 spindles from Universal Winding Co. for the processing of nylon into Saaba yarn.

Seneca, S. C.—Construction of a 10,000-square-foot addition to the Kendall Co.'s plant here will be started by November, the company reports. The plant was purchased by Kendall recently. It was previously occupied by the Abbott Worsted Co. The present building contains 100,000 square feet of space and is air conditioned.

Lumberton, N. C.—Operations have begun at the Vel-Cord Southern Corp., here, the first Southern unit of the Vel-Cord Corp., Fall River, Mass. The plant is currently confining its operations to finishing corduroy but also plans to finish synthetic products in the future. Eventually the plant will employ 250 and will have an annual payroll of $1 million.

Travelers Rest, S. C.—Two sizeable additions will be made to the Renfrew Bleachery of Abney Mills here. A two-story, 193x153-foot addition to one end of the plant will serve as a new cloth room and an addition of 203x44 feet at the opposite end of the plant will serve as an extension to the bleach plant. Daniel Construction Co. will build the new facilities. It is understood that a new 60,000-pound-per-hour steam boiler will be installed to meet process requirements of the two present plants. The dyeing and finishing facilities of the Gossett Dyeing and Finishing plant at Anderson, S. C., will be consolidated with those of Renfrew Bleachery.

Greenville, S. C.—Woodside Mills is installing feeler-motion attachments on all 2,600 looms in its plant here, according to Robert S. Small, president. Cost of the program will exceed $160,000. It is expected that installation will be complete by Spring. This installation is part of a program for upgrading fabric quality which has been under way for two years. New opening room equipment was previously installed and a new picker added. Some 60 cards were added and new drawing and roving frames were installed. Pneumafil was added to all spinning frames.

Biltmore, N. C. — Sayles Biltmore Bleacheries here has announced plans to install a continuous bleach range. A contract for a 40x118-foot addition to the present plant has been awarded to Daniel Construction Co. The new building will provide space for the installation of the new range.

Chester, S. C. — Col. Elliott Springs, president of Springs Cotton Mills here, has informed Chester's mayor, E. B. Bagby, of his willingness to undertake an extensive housing program to relieve the shortage of moderately priced homes here if the city will extend sewer and water lines to the development. The houses would sell for about $6,000 to $7,000, depending on the number of rooms.

Iva, S. C.—The Iva Plant of Jackson Mills plans to convert from 12x32-inch card cans to 18x42-inch cans holding 40 pounds of sliver, more than two and a half times the amount of the old cans. The picker room will be rearranged, also, and a fifth picker added.

Boston, Mass.—The Kendall Co. has reported net earnings of $769,000 on sales of $21,525,000 for the 12 weeks ended June 14, compared with earnings of $798,-000 on sales of $24,723,000 for the corresponding period last year. Included in 1958 net earnings was a capital gain, net of taxes, of 26 cents per share realized on the sale of the Thrift Plant at Paw Creek, N. C. After provision for preferred dividends, earnings for this second 12-week period of 1958 amounted to 72 cents per common share as against 75 cents per share in the same period of 1957. For the first 24 weeks of 1958, net earnings were $1,442,000 or $1.35 per common share on sales of $45,199,000, compared with earnings of $1,665,000 or $1.57 per share on sales of $49,397,000 last year. In his report to stockholders, Richard R. Higgins, president, said that almost all segments of the business had been affected by the general business recession.

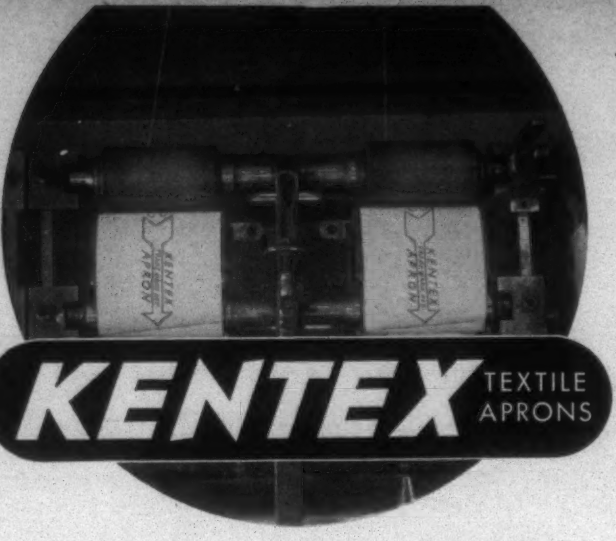
Greenville, S. C. — Southern Weaving Co. here has been awarded a contract from the Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Depot. The contract is for white cotton webbing and calls for bleached 1¾-inch width, type V, class 2. Dollar value of the contract is $28,960.

New York, N. Y.—Royal Little, board chairman of Textron Inc., reported early this month that earnings for the second quarter of 1958 were $1,303,000 on sales of $56,-489,000 which compare with a profit of $2,229,000 on sales of $64,827,000 for the same period of last year. This brought the first six months' earnings to $1,624,547 on sales volume of $112,659,077. The report did not include a breakdown showing activities in its textile operations.

Durham, N. C.—Erwin Mills here has reported a net profit of $770,939 for the nine months ended June 30 on sales of $42,001,538. This compared with net earnings of $993,645 on sales of $45,224,656 in the corresponding period last year. Per share earnings for the nine-month periods in 1957 and 1958 were 92 and 71 cents, respectively. For the three months ended June 30 the company reported net profits of $315,889 on sales on $15,594,034 against a profit of $260,125 on sales of $14,881,775 last year.

Greensboro, N. C.—Burlington Industries Inc. here has reported a net profit, after taxes and minority interests, of $7,-816,000 or 80 cents a share for the nine months ended June 28. Consolidated net sales for the period were $485,126,000. A net profit of $10,704,000 after taxes or $1.14 a share on net sales of $502,087,000 was recorded for the comparable period last year. Pacific Mills, controlled by Burlington, had a loss from operations of $128,000 for the nine months as compared with a net profit of $556,000 in the first nine months of 1957. Directors of Pacific Mills reduced the quarterly dividend from 20 to 15 cents.

New York, N. Y. — Deering-Milliken & Co. is now occupying its new modern headquarters building here. The eight-story structure is located on a 100x150-foot site on the corner of 39th St. and the Avenue of the Americas. An unusual feature of the building is a prefabricated moveable wall system with built-in flexibility for future space changes.



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U. S. Cotton Group To Tour Russia

As part of one of the few co-operative efforts entered into by the U. S. and Soviet Russia, a cotton task force will visit the Soviet Union for a six-week study starting next month. The trip will include visits to Russian cotton producing areas as well as to the mills. The cotton group is to be composed of William J. Martin, cotton utilization specialist for the U. S. Department of Agriculture at Clemson, S. C.; Charles H. Barber, Foreign Agricultural Service, Washington, D. C.; Victor L. Stredronsky, agricultural engineer, Mesilla Park, N. M.; Edward J. Overby, director, cotton division, Agricultural Marketing Service, Washington; William M. Waddle, Agricultural Research service, Washington; and Leonard A. Mobley, National Cotton Council of America, Washington.

Alabama Textilists To Meet Oct. 10

A meeting of the public relations committee of the Alabama Textile Manufacturers Association will be held in Birmingham, October 10. The principal speaker will be Rep. W. J. B. Dorn of South Carolina, according to A. T. Hansen, chairman of the committee.

A meeting of the association's board of directors appointed members to a safety committee and an exploratory committee. The purpose of the safety committee is to enlarge the scope of the association's safety program. Its members are: Joe L. Jennings, Lanett, chairman; Hugh Comer, Sylacauga; T. H. Floyd, Opelika; R. C. Moyer, Blue Mountain; and George R. Hooper, Anniston.

The exploratory committee was appointed for the purpose of considering the forming of a personnel directors group in the association. S. W. Tingen, Montgomery, was named chairman. Other committee members are: Lem Coley, Alexander City; A. T. Hansen, Fairfax; W. C. Estes, Opp; and Graham McLintock, Alexander City; A. C. Harris, Talladega, was named chairman of the cotton committee.

A.C.M.I. Names Committee Heads

Seventeen leaders of the textile industry have been named to head committees of the American Cotton Manufacturers Institute, central trade association of the textile manufacturing industry. The committees plan activities for the benefit of the industry generally through A.C.M.I., which includes in its membership cotton, man-made fiber and silk mills.

A.C.M.I. President Halbert M. Jones of Laurinburg, N. C., has announced these appointments: Fred M. Lyon, president, Opp & Micolas Cotton Mills, Opp, Ala., Audit Committee; A. B. Emmert, vice-president, Dan River Mills, Danville, Va., representative on Board of Appeals; James A. Chapman Sr., president, Inman and Riverdale Mills, Inman, S. C., and A.C.M.I.'s first vice-president, Budget, Finance and Policy Committee; Ellison S. McKissick, treasurer, Alice Mfg. Co., Easley, S. C., Cotton Committee; C. A. Cannon, president, Cannon Mills, Co., Kannapolis, N. C., Cotton Policy Committee; F. E. Grier, president of Abney Mills, Economic Policy Committee; M. Earl Head, vice-president, West Point (Ga.) Mfg. Co., Education Committee; W. J. Erwin, president, Dan River Mills, Foreign Trade Committee; E. M. Fuller, Greenwood Mills, New York, representative on the General Abritration Council of the Textile Industry; Robert M. Schwarzenbach, president, The Schwarzenbach Huber Co., New York, Man-Made Fibers and Silk Committee; William E. Reid, president, egel Textile Corp., New York, Market Development and Expansion Committee; J. M. Cheatham, president, Dundee Mills, Griffin, Ga., and A.C.M.I.'s second vice-president, Membership Committee; L. G. Hardman Jr., president, Harmony Grove Mills, Commerce, Ga., and immediate past president of A.C.M.I., National Affairs Committee; R. Arthur Spaugh, president, Washington Mills Co., Winston-Salem, N. C., Public Relations Committee; John P. Elting, director of research, The Kendall Co., Paw Creek, N. C., Research & Technical Service Committee; James L. nkin, president, Ewing-Thomas Corp., Chester, Pa., Tax Committee; and Raymond L. Swetenburg, vice-president, Chicopee Mfg. Corp., Gainesville, Ga., Traffic Committee.

Subcommittee Looks At Industry Ills

Dr. William H. Miernyk, staff director of the Senate subcommittee investigating problems in the textile industry, took a two-day orientation junket into the South last month. Dr. Miernyk visited mills in Kannapolis and Gastonia, N. C., and in Greenville and Spartanburg, S. C. At a press gathering in Charlotte, Dr. Miernyk said that the purpose of his short visit was to gain impressions about the Southern textile industry.

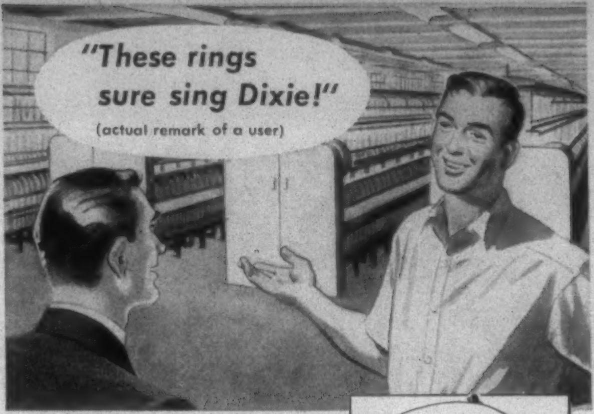
Beginning in September, the subcommittee will hold six or seven field hearings. They will be held in New England, the mid-Atlantic and the South. The location or locations of the Southern hearings has not been definitely determined.

Dr. Miernyk said he had been impressed with the youthfulness of the workers since it had been said that only the old people were staying in the mills.

The three areas that the subcommittee will investigate are: the U. S. agricultural program, particularly as related to cotton; the foreign trade program; and the foreign aid program. The subcommittee will attempt to determine what research has done to help in textiles.

September Made American Wool Month

September has been designated as American Wool Month by Woolens & Worsteds of America, a new association representing all segments of the wool textile industry. Promotional activities are limited this year since the group was formed only last month, but the committee felt it would be of value to establish American Wool Month this year. Manufacturers, retail stores and consumers will be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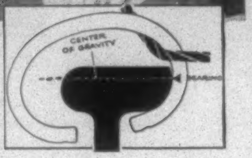

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In addition to the International Textile Machinery Exhibition at Manchester, England, members of the tour have been invited to visit Platt Bros. Sales, Ltd., Textile Machinery and Accessory Mfgrs. Assn., and the Manchester College of Science and Technology at Manchester; Jos. Sykes Bros. at Huddersfield; Dept. Textile Industries University of Leeds at Leeds; British Cotton Industry Research at Didsbury, Manchester; Algemene Kunstzijde Unie, N. V., Arnhem, Holland; Josef Pfenningsberg & Co., M. Gladbach, Germany; Institut Textile de France, Paris; Swiss Federal Institute of Technology, Zurich, Scharer Textile Machine Works, Erlenbach, Zurich, Jon. Jacob Reiter & Co., Ltd., Winterthur, Zellweger-Uster Co., Uster, Maschinen Fabrik Ruti, Zurich, Heberlein & Co., Zurich.

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informed of the importance of the month. Several key retail stores have indicated interest in promoting American-made wool products in local advertising and in-store displays. A full scale promotional plan complete with necessary materials for American Wool Month, September 1959, will be ready for manufacturers and retailers on May 1, 1959.

Fiber Society Program Announced

Dr. Lincoln R. Thiesmeyer, president, The Pulp & Paper Research Institute of Canada, will be the banquet speaker at the Fall meeting of The Fiber Society Inc. to be held at the Queen Elizabeth Hotel in Montreal, Canada, September 9-10. Dr. Thiesmeyer will address the meeting on "Science, Scientists and Social Change," described in advance as 'philosophical musings about the impact of scientists on modern life and vice versa,' a talk pertinent to the expected audience of noted scientists from the U. S. and Canada.

Eight technical papers comprise the two-day program as follows: "Relation of Charge to Frictional Work in the Static Electrification of Filaments," by J. B. Levy, J. H. Wakelin and J. H. Dillon, Textile Research Institute, Princeton, N. J., and W. J. Kauzmann, Princeton (N. J.) University. "The Fine Structure and Mechanical Properties of Untreated and Modified Cottons," by R. S. Orr and J. N. Grant, Southern Regional Research Laboratories, U.S.D.A., New Orleans, La. "An Electric Analogue to Study Flow of Liquids Through Fiber Assemblages," by J. L. Shearer, Massachusetts Institute of Technology, Cambridge, Mass. "The Influence of Biaxial Stress on the Flow of Air Through Woven Structures," by S. Backer, M.I.T., I. Zageil, Ford Motor Co., and C. Nozalsi, Nagoya Industrial Research Institute, Japan.

"Some Observations on the Action of Metal Amines on Wool," by C. S. Whewell, Department of Textile Industries, Leeds (England) University. "Mechanism of Pill Formation," by D. Gintis and E. J. Mead, Dacron Research Laboratory, The Du Pont Co., Kinston, N. C. "The Saturation Regain of Viscose Rayon Deduced From Density and Swelling Data," by M. L. Staples, Ontario Research Foundation, Toronto, Canada. "An Instrument for Study of Friction and Static Electrification of Yarns," by D. A. Zaukelies, The Chemstrand Corp., Decatur, Ala.

Ladies attending the convention will have an opportunity to visit on a planned tour the surgical dressings plant and research center of Johnson & Johnson Ltd., as well as historic landmarks of Montreal. The election of new officers will also take place at the meeting.

Co-Operative Education Program Begun

What is said to be the nation's first two year co-operative program in textile technology will be offered by the Southern Technical Institute of Chamblee, Ga., beginning this Fall, according to John I. Alford, director of the program. The new program, which will enable a student to earn a degree of Associate in Science in Textile Technology, was developed by Southern Tech and Georgia Tech in co-operation with the Textile Education Foundation Inc., whose members make up the Georgia textile industry.

Under the new co-op plan, students will alternate between classroom and job for six school quarters and five work quarters in a textile mill. According to Alford, this ar ngement will make it possible for the student to earn a ajor portion of his school expenses. "At the same time," A ord emphasized, "the company for which the young m or woman is working can closely observe their deve pment during the formal education period." Southern T h textile graduates will be capable of filling a wide r ge of supervisory, technician and laboratory jobs in n dern textile mills, Alford said.

A C.M.I. Group At International Meeting

A five-man delegation from the American Cotton Manuf turers Institute left this country August 20 to represent t institute at the annual conference of the International F deration of Cotton and Allied Textile Industries which is being held in Stockholm, Sweden, beginning August 25. H lbert M. Jones, president of the A.C.M.I., said that the i stitute is studying the possibility of an affiliation with th international group.

The five-man delegation is headed by William J. Erwin, president of Dan River Mills, Danville, Va., chairman of the institute's Foreign Trade Committee. Other members of the delegation are R. Houston Jewell, vice-president of Crystal Springs Bleachery, Chicamauga, Ga.; F. E. Grier, president of Abney Mills, Greenwood, S. C.; J. Craig Smith, president of Avondale Mills, Sylacauga, Ala., who will also represent the National Cotton Council, an associate member of the federation; and Robert C. Jackson, executive vice-president of the A.C.M.I., Washington, D. C.

The international organization includes the textile and allied industries of England, France, Japan, Austria, Belgium, Denmark, Sweden, Switzerland, Egypt, Finland, West Germany, Holland, Italy, Norway and Portugal.

Second Half Textile Upturn Seen

Textile industry sales are expected by *The Value Line Investment Survey* to turn upward in the current second half of 1958. Retailers' inventories are now low relative to sales. There are already scattered reports of improved mill backlogs. Dollar volume in the final quarter of 1958, the *Survey* remarks, may even top the like 1957 period. As a result textile sales for the full year 1958 may be reasonably close to those of 1957.

Earnings comparisons, however, will remain unfavorable. Many of the fabrics to be shipped in nearby months will carry relatively low selling prices. Though a cyclical upturn may be in the making, the fundamental difficulties of the textile industry, too much capacity and too much ompetition, both domestic and foreign, are not likely to e quickly resolved.

Military Cotton Use About Average

Some 26,600 bales of cotton were used in textile items elivered to the military in the first quarter of 1958, acording to calculations by the U. S. Department of Agriulture. This is about equal to the quarterly average of ast year.

Total military consumption of cotton last year was 06,200 bales. Cotton fabric deliveries during the first uarter, while above the second half of last year were far elow the first quarter of 1957.

Military consumption of man-made fibers and wool durng the first quarter was considerably below that for the rst quarter of last year. About 137,000 pounds of man-

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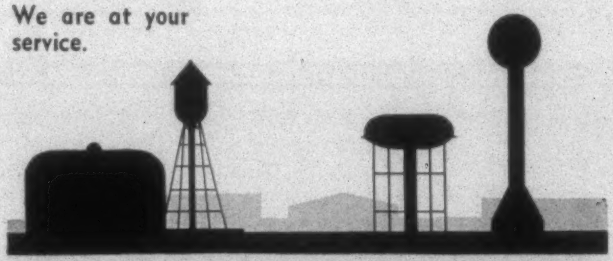

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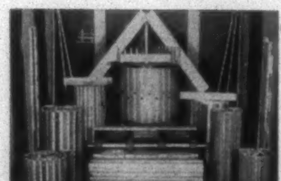

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made fiber and about 1,989,000 pounds of wool were c sumed in textile items delivered to the military in the f st quarter. These figures compared with 2,119,000 pou ds of man-made fibers and 4,445,000 pounds of wool c sumed during the first quarter of last year.

Public Relations Conference Oct. 5-6

J. Craig Smith, president of Avondale Mills, Sylacau a, Ala., will be one of the featured speakers at the D e Public Relations Conference at the University of Geor ia in Athens, October 5-6. An invitation has been exten d to management representatives from textile mills throu out the Southeast to attend the conference and to br g with them the person in their organizations responsible r public relations. Theme of this year's conference s "PROFIT begins with PR." Complete details can be o tained by writing the Center for Continuing Educatio , University of Georgia, Athens.

Clemson Announces Textile Scholarships

Clemson College has announced the awarding of nine textile scholarships for the coming year. The sponsors and the scholarship values are as follows: the Chemstrand Corp., Decatur, Ala., $500; Leon Lowenstein, New York City, two awards of $600; J. P. Stevens & Co., Greensboro, N. C., a four-year award of $2,000; South Carolina Textile Manufacturers Association, a four-year award of $2,000; the American Viscose Corp., New York City, $500; Ciba Co., New York City, $500; Seydel-Woolley & Co., Atlanta, Ga., $250; and Keever Starch Co., Columbus, Ohio, $400.

Heat To Be Subject Of Greensboro Meeting

The American Gas Association and The Southeastern Gas Association will sponsor a textile symposium in Greensboro, N. C., at Sedgefield Inn, September 8-9. The symposium will provide a means for a meeting of minds on textile processing operations in the area where heat is required and will bring together all segments for a frank and open discussion of the problems faced by producers of fabric, natural and synthetic; textile finishers; textile machinery manufacturers; manufacturers of gas equipmen suitable for textile applications; and the gas industry. Th interests of the textile and gas industry will be served an there will be ample opportunity to discuss mutual prob lems and get answers from qualified authorities that wi benefit all concerned.

Featured speakers and topics are: R. H. Murray, Industrial and Commercial Gas Section, A.G.A., "Gas Servic and the Textile Industry"; Harold B. Sturdivant, The D Pont Co., "The Effect of Heat on Chemical and Physica Properties of Poly Fibers"; W. T. English, Burlington In dustries, "Problems on Utilization of Fuel"; Normand S Pliner, Celanese Corp. of America, "Synthetic Fiber Re search"; two talks on air heating applications by D. A Colker, National Drying Machinery Co. and W. A. Met calfe, J. O. Ross Engineering Co.; Dr. Edward R. Murray School of Textiles. North Carolina State College, "Wha the Textile School Can Contribute"; John Sellers Jr., Bryan Industrial Products Co., "Textiles, Air and Gas"; Walte H. Hindle, Chemstrand Corp., "Profits Through Research" R. C. LeMay, Selas Corp. of America, "Research in the Future"; and the closing address by John G. Hopping, Piedmont Natural Gas Co.

Tire Cord Production Drops 13%

The Bureau of the Census reports that production of tire cord and tire cord fabric during the second quarter 1958 was 80,533 thousand pounds. This was 13 per cent below the previous quarter, and 30 per cent below the second quarter 1957 level.

The output of rayon tire cord and tire cord fabric decreased 26 per cent from the previous quarter's level to 4[illegible]918 thousand pounds. During the same period the production of nylon tire cord and tire cord fabric increased 41 per cent to 22,609 thousand pounds, while the production of cotton tire cord and tire cord fabric (excluding chafer fabrics) decreased seven per cent.

Stocks of tire cord and tire cord fabric on June 28, 1958, were 37,601 thousand pounds, or 17 per cent below the March 29, 1958, level and 32 per cent less than the stocks on June 29, 1957.

Cotton Consumption Down

Cotton consumption in the U. S. in June totalled 595,648 running bales, a slight drop from the May total of 599,690 bales and considerably below the June 1957 total of 648,964 bales, according to figures given by the U. S. Department of Commerce. Total stocks were indicated at 9,238,372 bales against 10,168,199 in May and 11,294,503 in June of last year.

Some 5,449 bales of foreign cotton were consumed in this country in June. For May the total was 5,729 and for June 1957 it was 6,168. Man-made fiber staple consumption for the month totalled 32,728 thousand pounds against 31,585 thousand pounds in May and 33,053 thousand pounds in June last year.

Cotton system spindles in place at the end of June totalled 20,923 thousand, nearly the same as the 20,971 thousand in place at the end of May but fewer than the 21,209 thousand in place at the end of June 1957.

Synthetic, Silk Fabric Production Down

The production of man-made fiber and silk broad woven fabrics totalled 2,272 million linear yards in 1957. This was one per cent lower than the 1956 output of 2,290 million linear yards and 14 per cent below the 1955 level. Rayon and acetate broad woven fabric production was 1,454 million linear yards. This compares with 1956 and 1955 production of 1,626 and 1,928 million linear yards, respectively. The 1957 production of 100 per cent filament rayon and acetate yarn fabrics was 13 per cent below the 1956 level and 23 per cent below the output in 1955. The production of 100 per cent spun rayon and acetate yarn fabrics amounted to 281 million linear yards, and was 20 per cent below the 1956 level. Other man-made fiber fabric production including silk in 1957 rose to 818 million linear yards from the 1956 and 1955 levels of 664 and 599 million linear yards, respectively.

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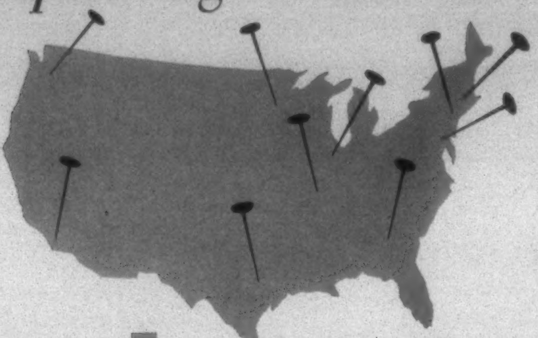

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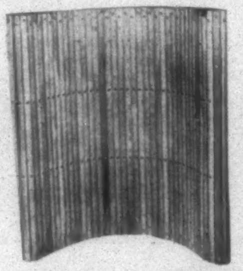

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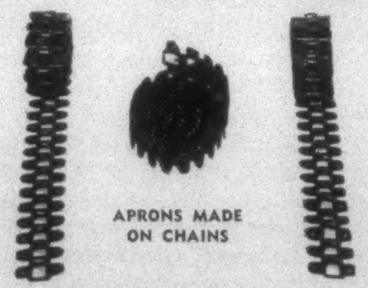

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Vol. 84 AUGUST 1958 No. 8

textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Southern Textile Exposition: Bigger And Better

THAT the 20th biennial Southern Textile Exposition, to be held in Greenville, S. C., Oct. 6-10, will be bigger and better than ever is an established fact. Not only will the exposition site be physically larger, by the addition of two new annexes totalling 16,000 square feet, but also the number of exhibits will be greater and, generally, they will be larger in size. The total area of Textile Hall is now more than 100,000 square feet. This area is 100 per cent greater than that occupied by the 1950 show.

Informal surveys have shown that nearly all of the attendance at the show is made up of mill management, owners, superintendents, engineers, foremen, department heads and research men. The show permits these men to go on a sort of five-day window-shopping tour for everything that is new in textile machinery, equipment and accessories. Completed questionnaires concerning what is to be exhibited by various manufacturers and suppliers sent out by this journal have been pouring into our office and we expect to run a complete preview of the show in our next, September, issue. This information will be a valuable guide to everyone attending the show with the idea of seeing the most in the limited time available. Our coverage will include companies exhibiting, booth numbers, items to be shown and the names of personnel manning the booths.

A recent trend is toward a more pronounced accent on heavier machinery and equipment and on basic high speed machines as well as on new electronic and stop motion devices. All of these are aimed at stepped-up production, costs saving and quality control. Every manufacturer wants to make a better textile product, at a lower cost than ever before. More efficient machinery is, in fact, about the only avenue to success for the textile manufacturer in the face of rising raw material, labor and selling costs.

Textile economists as well as textile machinery men generally agree that the state of obsolescence of a considerable amount of the capital equipment of U. S. mills is one of the most serious economic problems of the industry. It has been generally noted that in recent years the textile trade associations and the textile machinery manufacturers have co-operated hand-in-hand to bring about a clearer understanding and solution to problems such as this and to others affecting the industry's economic well being.

Reciprocal Trade

THE Reciprocal Trade Agreements Act has now been extended another four years (to June 30, 1962) and the President has been given authority to cut tariffs by an additional 20 per cent. While this very nearly approaches what the Eisenhower Administration asked for to begin with (the initial request was for a five-year extension and authority to cut tariffs by 25 per cent), the bill at the same time does offer improvement over previous extensions.

As pointed out by Halbert M. Jones, president of Waverly Mills, Laurinburg, N. C., and president of both the American Cotton Manufacturers Institute and the North Carolina Textile Manufacturers Associations: "The Trade Agreements Act as finally adopted by Congress does not contain several provisions supported by the textile industry which would have greatly strengthened it, but the legislation represents marked improvement over prior extensions and, wisely administered, can aid in building foreign trade on a mutually reciprocal basis. It, however, continues to be essential that low wage foreign textile imports be prevented from further damaging our textile economy."

The use by Mr. Jones of the words "mutually reciprocal" were also emphasized by Donald Comer, chairman of the executive committee of Avondale Mills, Sylacauga, Ala. Commenting on extension of the trade bill in its final form, Mr. Comer calls attention to the fact that the U. S. textile industry favors *reciprocal* trade, whereby we are allowed to buy what we need and want rather than having to take what we don't need and don't want.

Our production and expansion planning and our price structure will remain unsettled and disturbed because of the threat of increasing imports of goods made by Asian standards from cotton sold them at 20 per cent discount," Mr. Comer warns.

Still another similar view is that of Leon Lowenstein, chairman of the board, M. Lowenstein & Sons Inc. Approached on his reaction to extension of the trade agreements bill, Mr. Lowenstein said he believes that "passage of the Reciprocal Trade Agreements Act shows a lack of understanding by the Administration of industries problems. Unless we have proper tariffs, the U. S. market will be flooded by goods made in countries paying slave labor rates."

Leading the industry's efforts to improve the extended version of the trade agreements act was the American Cotton Manufacturers Institute. How does it view the extended version? In a formal statement issued the day the final bill cleared the Senate, the institute gave its official reaction as follows:

"The American Cotton Manufacturers Institute believes that the Trade Agreements Act of 1958 brought certain improvements over previous extensions. The more important changes are:

(1) The authority to raise tariff rates 50 per cent above the 1934 rates (considerably higher rates than those in effect on the present base date of January 1, 1945).

(2) Extending the 120-day period for peril point investigation to six months.

(3) Reducing the time for escape clause actions from nine to six months.

(4) If, in the course of a peril point investigation, the Tariff Commission finds that a previous concession has resulted in a need for additional import restrictions to avoid injury to domestic industry, it shall promptly institute an escape clause action.

(5) The Tariff Commission is directed to determine foreign production costs as reflected in export invoices on a country of origin basis for comparison with wholesale selling prices of competitive articles produced in the U. S. This information is for use in the determination of peril points prior to negotiations.

(6) The Tariff Commission is directed to determine 'The maximum increase in annual imports which may occur without causing injury to the domestic industry producing like or directly competitive articles.'

(7) The Tariff Commission shall request executive agencies and departments for all information in their possession concerning prices and other economic data from the principal supplier foreign country on each article to be negotiated.

(8) The President is directed to consider the close relation of the economic welfare to our national security and take into account the impact of foreign competition on the economic welfare of individual industries (including unemployment and other serious effects resulting substantially from excessive imports).

(9) The Congress declared its intent that the President, during the course of negotiating any foreign trade agreement, should seek information and advice from representatives of industry, agriculture and labor.

"Despite the longer term of the extension and the more liberal tariff-cutting powers, the free-trade Committee for a National Trade Policy has labeled this extension the 'most highly protectionist' trade agreements legislation since the program was initially enacted in 1934.

"Actually, while the bill is considered to be a strong victory for the Administration, the fact remains that from the textile industry's point of view the new law is a very considerable improvement over previous extensions."

TEXTILE INDUSTRY SCHEDULE

— 1958 —

Sept. 9-10 (Tu-W)—Fall Meeting, **THE FIBER SOCIETY**, Montreal, Canada.

Sept. 11-12 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 13 (Sa)—South Central Section, **A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.

Sept. 13 (Sa)—Southeastern Section, **A.A.T.C.C.**, Ida Cason Gardens, Chipley, Ga.

Sept. 18-19 (Th-F)—Golf tournament and outing, **CHATTANOOGA YARN ASSOCIATION**, Read House, Chattanooga, Tenn.

Sept. 19-20 (F-Sa)—Piedmont Section, **A.A.T.C.C.**, Hotel Charlotte, Charlotte, N. C.

Sept. 25-26 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 1-2 (W-Th)—Seventh annual **CHEMICAL FINISHING CONFERENCE** (sponsored by the National Cotton Council), Washington, D. C.

*Oct. 5-6 (Su-M)—**DIXIE PUBLIC RELATIONS CONFERENCE** (sponsored by the Public Relations Society of America), University of Georgia, Athens.

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 9-10 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 10 (F)—Fall meeting, **SOUTHERN TEXTILE OVERSEERS ASSOCIATION**, Greenville, S. C.

Oct. 14-17 (Tu-F)—Fall meeting, **A.S.T.M. COMMITTEE D-13 ON TEXTILES**, Sheraton-McAlpin Hotel, New York City.

Oct. 21-22 (Tu-W)—**THE 1958 COTTON SPINNER-BREEDER CONFERENCE**, Lubbock, Tex.

Oct. 23-24 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

Oct. 25 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 28-29 (Tu-W)—Technical Advisory Committee and Board of Trustees meetings, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Oct. 28-31 (Tu-F)—Annual meeting, **CARDED YARN ASSOCIATION**, The Homestead, Hot Springs, Va.

Oct. 30-Nov. 1 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

Oct. 30-Nov. 1 (Th-Sa)—Fall meeting, **J. E. SIRRINE TEXTILE FOUNDATION**, Clemson, S. C.

Nov. 7-8 (F-Sa)—**TEXTILE SEMINAR** (sponsored by the University of Georgia Division of Clothing and Textiles in Extension, Teaching, Research), Georgia Center for Continuing Education, Athens, Ga.

Nov. 8 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, Georgia Tech, Atlanta.

— 1959 —

Mar. 19-21 (Th-Sa)—Annual convention, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

Apr. 29-30 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Fontana Village, N. C.

May 12-14 (Tu-Th)—**COTTON RESEARCH CLINIC** (sponsored by the National Cotton Council), The Grove Park Inn, Asheville, N. C.

June 18-20 (Th-Sa)—51st Annual Convention, **SOUTHERN TEXTILE ASSOCIATION**, The Ocean Forest Hotel, Myrtle Beach, S. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

Listed for the first time this month. ‡Tentative listing. †Changed or corrected from previous issue.

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- If you want a new job, if you are seeking someone to fill a position, the classified advertising department of Textile Bulletin is ready to help. The classified section is read by both employees and employers.

- Firms having textile mill equipment for sale also find Textile Bulletin classified advertisements valuable in establishing business contacts.

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